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ABSTRACT

This paper provides the necessary conceptual clarification which will allow the notion of information equity to become a meaningful, usable concept upon which to base information oriented policies, programs, research projects, and service efforts in the field of education. It is divided into four major sections: Part I analyzes the concepts of equality and equity and determines the possible interpretations attributed to each: Part II analyzes information equity, focusing on the clarification of information related concepts and the synthesis of these concepts with equality and equity interpretations: Part III enumerates and explains the more practically-oriented issues involving information equity policy decisions and indicates the connection between conceptual and practical considerations: Part IV discusses general policy recommendations, indicating the direction in which information equity policy statements and programs should proceed. References and a bibliography are provided. (Author/FM)

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INFORMATION EQUITY
IN THE FIELD OF EDUCATION:
A CONCEPT PAPER

Glen Harvey

March 1980

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Educational Dissemination Studies Program

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

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ABSTRACT

The purpose of the paper is to provide the necessary conceptual clarification which will allow the notion of information equity to become a meaningful, usable concept upon which to base information oriented policies, programs, research projects, and service efforts in the field of education.

The paper is divided into four major sections. Part I analyzes the concepts equality and equity and determines the possible interpretations attributed to each. Equality tends to be associated with sameness; equity tends to be associated with fairness. Formal principles of equality and equity constitute general precepts which do not indicate specifically how people should be treated or how equality or equity principles should be applied. Substantive equality and equity include those principles which explain or prescribe how particular members of society are to be treated. There are three separate substantive concepts of equality: equality of opportunity, equality of treatment, and equality of results. Similarly, there are three separate substantive concepts of equity: equity of access, equity of input, and equity of output.

Part II of the paper analyzes information equity, focusing on the clarification of information related concepts and the synthesis of these concepts with equality and equity interpretations. Information equity as access focuses on routes of access or opportunities with respect to information. Information equity as treatment emphasizes treatment or input, reflecting the notions of horizontal and vertical equity i.e., equal treatment of people in equal positions and unequal treatment of people in unequal positions. Information equity as results emphasizes outcomes (output). This can mean same results, minimal achievement, same progress, proportionate results, or equivalent results.

Part III enumerates and explains the more practically oriented issues involving information equity policy decisions and indicates the connection between conceptual and practical considerations. Each of the basic information equity intepretations--access, treatment, results--is considered separately. Much of this section involves providing lists of questions and issues that must be addressed before policies and programs can be adequately designed and implemented. Criticisms of and problems with each of the three basic information equity positions are also examined.

Part IV discusses general policy recommendations, indicating the direction in which information equity policy statements and programs should proceed and suggesting the goals for which to aim.

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FOREWORD

The Educational Dissemination Studies Program (EDSP) has three general objectives: 1) to establish efficient means for analyzing, monitoring, and communicating the status, needs, and accomplishments of educational dissemination performers; 2) to increase the quality of and access to knowledge pertaining to the educational dissemination process; and 3) to establish a capacity for organizing and conducting special studies contributing to the improvement of educational dissemination as a regional and nationwide effort.

This report is one of a series of EDSP special studies concerned with conceptualization and exploration of information equity issues in education. This series of information equity studies began in the Summer of 1978 with a mini conference held at the Far West Laboratory. Representatives of women's, various minority and ethnic groups, the physically handicapped, and the geographically isolated made presentations describing information needs, barriers, and problems confronted by the various groups. Subsequent to the conference, Dr. William Paisley, Institute for Communication Research, Stanford University, and Ms. Mary Kathryn Cirksena and Dr. Matilda Butler, both of the Women's Educational Equity Communications Network, Far West Laboratory, completed two experimental studies.

In the first study, they examined the ERIC Data Base coverage for five groups--migrant populations, rural populations, women, the disabled, and racial/ethnic minorities. Total numbers of documents/articles pertaining to each group were determined, but a sharper comparison of coverage was also made in terms of a set of educational topics that spanned the range from individual traits through school-based experiences through later employment. These analyses demonstrated that three of the five groups--women, the disabled, and racial/ethnic minorities--are each referenced by about 15,000 documents/articles in the ERIC Data Base. About half as many (7,000) pertain to rural populations, while a much smaller number (1,000) pertain to migrants. However, there are large differences among the groups in the coverage of various topics. Analysis of topical categories by groups suggests the possibility that the literature pertaining to some groups may have less depth and breadth, document for document, than literature pertaining to other groups.

The second study examined the geographic distribution of information programs throughout the U.S. by disaggregating selected data on information programs, ERIC collections, location of information users, and other demographic indicators down to the level of 251 Standard Metropolitan Statistical Areas (SMSAs) and 334 SMSA/Rural Areas. Cross tabulation and multiple correlation analyses of these data demonstrated that resources such as information programs and ERIC collections are not equitably distributed throughout the United States. That is, they are not present at all levels of urbanism and in rural areas in proportion to population. The discrepancy is greatest in small town and rural America, where 11% of the information programs and 18% of the ERIC collections serve 27% of the population.

The results of these two studies were presented at an NIE-sponsored conference on information equity in Washington, DC on February 22-23, 1979, and were published by EDSP (Paisley, W., Cirksena, M. K., and Butler, M., Conceptualization of Information Equity Issues in Education, February 1979). On the basis of this exploratory work, EDSP proposed a set of four interrelated strands of study activity: 1) analyzing the conceptual and policy issues and alternatives implied by information equity, 2) conducting more detailed analysis of the documentary knowledge base in terms of information needs of various groups, 3) developing more data on geographic distribution of statistical indicators of knowledge production, dissemination, and utilization, 4) conducting small case studies of knowledge utilization by specific equity groups. This report addresses the first of these strands of study activity.

To conduct this conceptual analysis, EDSP was fortunate to obtain the services of Dr. Glen Harvey, a graduate of Stanford University with a major in educational philosophy, who has written and worked in several areas--e.g., educational finance and governance, women's equity--bearing on educational equality and equity issues. Dr. Harvey's background in philosophy and her experience in dealing with specific issues of equality and equity in education have enabled her to approach the issues of information equity in the field of education with an unusually broad view of the possible positions that may be taken, and with a good grasp of the many questions that must be confronted and answered. This document is definitely not light reading, but I assure the reader that it is worth the effort of anyone who may be concerned with the possibilities of achieving greater information equity in the field of education.

Paul D. Hood
March 1980

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EXECUTIVE SUMMARY

The purpose of this paper is to provide the necessary conceptual clarification which will allow the notion of information equity to become a meaningful, usable concept upon which to base information oriented policies, programs, research projects, and service efforts in the field of education. As the term "information equity" is used here and throughout the paper, it refers only to equity with respect to information in the field of education. However, the conceptual distinctions and clarifications contained within the paper are similarly applicable to information equity in many other fields as well.

The paper is divided into four major sections. Part I analyzes the concepts equality and equity and determines the possible interpretations attributed to each. Part II analyzes information equity, focusing on the clarification of information related concepts and the synthesis of these concepts with equality/equity interpretations. Part III illustrates possible programs and policies in the field of education representative of different information equity interpretations and examines the actual and potential problems associated with them. Part IV discusses information equity policy recommendations.

One of the major obstacles in providing the necessary conceptual clarification of information equity is the lack of agreement concerning the meaning of equity. Often used interchangeably with equality, equity can be interpreted in a variety of ways. The first step in clarifying information equity is thus analyses of the concepts equality and equity. These analyses indicate the following:

1. *Equality* tends to be associated with *sameness* as in the mathematical claim "x is equal to y" where "equal" means x and y are the same with respect to certain designated characteristics. Until these characteristics are specified, however, the notion of equality as sameness remains almost meaningless with respect to practical application.

   Equity tends to be associated with *fairness* (or justice). Part of an equitable distribution, for example, is that it is thought to be fair. The implication of equity is that fairness does not always mean same (equal). The requirement of an equitable distribution may, in fact, be used to justify inequalities, depending on the interpretation given to equity.

2. Equality has traditionally been interpreted as indicating a general principle (or principles) concerning the treatment of individuals. Such principles are considered *formal* in the sense that they constitute general precepts. They do not indicate specifically how people should be treated or how equality or equity principles should be applied. They thus involve minimal disagreement but remain fairly meaningless without additional explanation.

3. In contrast to formal equality and equity, substantive equality and equity include those principles which explain or prescribe how particular members of society are to be treated. Principles of this type are indeterminate; they are context-dependent. It is at this more specific level that disagreements concerning the meaning of equality and equity normally occur.

4. Disagreements often can be traced to different positions regarding the justification for differential opportunity, treatment, or results. What characteristics and/or factors are relevant in justifying treating people in different ways? Disagreements of this type often focus on merit and need.

5. There is also considerable disagreement concerning the appropriate focus of equality and equity. Should it be on opportunity/access, treatment/input, or results/output? Three separate substantive concepts of equality--equality of opportunity, equality of treatment, equality of results--and three separate substantive concepts of equity--equity of access, equity of input, equity of output--reflect these disagreements. Each of these concepts, in turn, involves alternative, often conflicting, interpretations (positions).

6. Equality of opportunity is perhaps the most common of the three substantive concepts of equality in current equality literature, particularly in the field of education. The general thrust of the concept is the provision of access to a particular treatment(s). There are two broad interpretations of the meaning of equality of opportunity: formalism and actualism.

   Formalism rests on the notion of "equality as sameness," prescribing that access to a benefit or treatment should be equal i.e., the same. Whether an individual has the necessary background and/or ability to take advantage of this access is not an issue; that depends on individual effort, responsibility, and motivation. Compensatory programs are not a primary concern. The emphasis is on merit--not need--and characteristics deemed relevant tend to be those limited strictly--and narrowly--to the immediate treatment or benefit being considered.

   Actualism emphasizes both the provision of equal opportunity/access (to some benefit and/or treatment) and the elimination of and/or compensation for barriers, restrictions, past inequalities, and so forth which hinder taking advantage of this opportunity/access. Individual needs and differences are important considerations, reflecting the view that not everyone will be equally able to take advantage of the opportunities which are (equally) provided without additional, appropriate, often compensatory opportunities (or treatment) being provided. Two types of actualism have been identified: compensatory and alternative. Compensatory actualism assumes common goals but allows for different means of attaining them. Title I compensatory educational programs exemplify this approach. Alternative actualism allows for both alternative routes of access and alternative--though equivalent--goals. The idea underlying the Special Olympics reflects the spirit of alternative actualism.

Equity of access reflects the same formalist and actualist interpretations as discussed in connection with equality of opportunity. The only necessary revision is the switch from equality (sameness) to equity (fairness). This substitution is of only minimal consequence, however. When reference is made to equality of opportunity, the assumption is made that opportunities will be the same unless relevant reasons are shown for differences in routes of access. When reference is made to equity in access (or opportunity), the assumption is made that opportunities will be provided fairly--fairly implying that relevant reasons will be given for differences in routes of access.

7. In *equality of treatment*, the position is taken that it is not access that should be of primary concern (or it is *not only* access), but the actual treatment itself. In a general sense, treatment includes actions, practices, distributions, rules, regulations, and so forth. Yet, it is unlikely that anyone intends to require that all practices, activities, and so forth be considered and evaluated with respect to equality. A substantive principle of equality of treatment must therefore be particularized to the context to which it is to be applied--*equality of treatment with respect to what*?

Equity of input is again very similar to equality of treatment. Input on the part of an individual can include such things as abilities, effort, intelligence, resources, skills, and so forth. Input on the part of an organization, institution, or program can be even more broadly interpreted, e.g., pupil expenditures, libraries, quality of teachers, teacher morale, equipment, attendance regulations.

8. While treatment and opportunity positions emphasize input i.e., what is done to the individual, *equality of results* focuses on outcomes. There are a variety of possible interpretations which can be given to equality of results: *same results*, *minimal achievement/minimum attainment*, *same progress*, *proportionate results*, and *equivalent results*.

Equity of output is perhaps the most common form of substantive equity, reflecting the economic orientation of the term. Given the tendency to interpret equity as a distributional term, positions generally focus on input-output ratios. Formulation and calculation of these ratios reflect different interpretations of equity of output. The usual equity formulation is based on a meritocratic approach where the individual input determines the share of the output. An alternative interpretation emphasizes the distribution of output on the basis of need, regardless of input.

In addition to these findings, other clarifications and distinctions must be made in order to provide a conceptual analysis of information equity. These focus on information related concepts, e.g., *knowledge-information distinctions*, *dissemination*, *utilization*, *information needs*, *information users*. Part II clarifies these concepts and synthesizes them with the three substantive concepts--access, treatment, results--discussed in Part I. The findings of Part II indicate:

1. While equality tends to be the more predominant concept in educational literature, the use of equity is preferable because of its association with fairness. However, the equity positions discussed in Part I are too oriented toward economics and school finance. They are therefore synthesized with the equality positions resulting in three substantive concepts of information equity consistent with information concepts and orientations: information equity as access, information equity as treatment, information equity as results.

2. Information equity as access focuses on routes of access or opportunities with respect to information. If the formalist position is assumed, the emphasis is on providing the same access (opportunities), regardless of an individual's ability to take advantage of this access. The latter is a matter of individual capability, initiative, and responsibility. If one of the actualist positions is assumed, elimination of and/or compensation for barriers, restrictions, past inequalities, and so forth which hinder taking advantage of routes of access are given more consideration.

   The tendency in information access interpretations is to disregard the training that may be required to enable an individual to understand and use the available information. Although an actualist interpretation can take this somewhat into account, the emphasis on access directs attention away from treatment and utilization. The focus is primarily on a limited notion of dissemination.

3. Information equity as treatment emphasizes treatment or input, reflecting the notions of horizontal and vertical equity i.e., equal treatment of people in equal positions and unequal treatment of people in unequal positions. Treatment can be interpreted in a variety of ways, e.g., information dissemination, training in the retrieval and use of information, consideration of information needs, application and enforcement of rules and regulations governing information dissemination and utilization, etc. Whatever the interpretation, it is treatment, not utilization, that provides the parameters for formulating information policies and programs.

4. Information equity as results emphasizes outcomes (output). This can mean same results, minimal achievement, same progress, proportionate results, or equivalent results. In all these interpretations the focus tends to be on the identification of results with information utilization and/or the ability to understand and use available information. Results positions reflect the view that it is not sufficient to make information access and treatment more equitable since these can (and will) allow inequities with respect to information. It is only when the effectiveness of access and treatment (in terms of impact, achievement, results) are made equitable that "real" information equity can exist.

While Parts I and II focus on conceptual distinctions and issues, Part III enumerates and explains the more practically oriented issues involving information equity policy decisions and indicates the connection between conceptual and practical considerations. Each of the basic information equity interpretations--access, treatment, results--is considered separately. The broad interpretation is reiterated, followed by examples illustrating possible variations of the interpretation and a discussion of problems, limitations, issues, and consequences which must be considered.

Much of this section involves providing extensive lists of questions and issues that must be addressed before policies and programs can be adequately designed and implemented. These questions cover a broad range of topics, including information users, information user needs, goals, feasibility, evaluation, cost benefit analysis, consequences/outcomes, and so forth. Criticisms of and problems with each of the three basic information equity positions (access, treatment, results) are also examined.

Part IV discusses general policy recommendations, indicating the direction in which information equity policy statements and programs should proceed and suggesting the goals for which to aim. These recommendations include:

1. The use of equity rather than equality be retained and interpreted as meaning fairness. Fairness, in turn, should be interpreted to mean same (equal) treatment/access of equals but differential treatment/access for unequals, determined on the basis of need.

2. Needs should be interpreted to mean the gap between what is and what should be, focusing on the differences between the information poor and rich. Identification of needs should include consultation with professionals, experts, and the individual users and should ultimately include societal, community, personal, and group related needs in the form of long-range, short-range, potential, and actual needs.

3. Information should be given a broad interpretation. Within the context of educational information, what this will constitute should be determined on the basis of needs (as expressed by professionals, experts, and categories of users).

4. Identification of information needs of potential information users should focus on the following categories:

   - Intermediary User/Ultimate User

   - Roles
     - Student/Consumer
     - Professional
     - Public

   - Focus Group/Special Needs
     - women
     - racial
     - ethnic
     - disabled/handicapped
     - immigrants/migrants
     - geographically remote
     - poor
     - elderly
     - non-English speakers
     - institutionalized

5. Production of information should reflect consideration of the needs (and values) of all categories of information users.

6. In developing information equity oriented programs and policies, the focus should be on intelligibility, applicability, and utilization of information. Information should be intelligible to the user; it should be applicable i.e., it should have identifiable value for the user; and it should be put into use.

7. The interpretations given to information equity--access, treatment, results--should be considered generally representative of the various meanings associated with information equity and the terminology suggested here should be adopted and standardized.

8. Policies and programs should reflect a concern for access, treatment, *and* results. This involves providing routes of access to information, disseminating the information, and ensuring that the information is applicable, intelligible, and ultimately used. To neglect any one of these will lessen the possibility of decreasing the gap between the information rich and poor. When priorities are established, results interpretations are potentially the most extensive and can provide the best check on the actual effectiveness of program activities.

9. Specific policy recommendations as to which categories of users should be given special attention, whose needs are to be given priority, what kinds of information should be made available, etc., should be developed, using the conceptual work completed in the paper as a theoretical basis and the formulation-implementation questions (Part III) as guidelines. (Specific policy recommendations of this kind do not fall within the domain of the paper.)

INFORMATION EQUITY IN THE FIELD OF EDUCATION: A CONCEPT PAPER

Glen Harvey

GENERAL INTRODUCTION

The purpose of this paper is to provide the necessary conceptual clarification which will allow the notion of information equity to become a meaningful, usable concept upon which to base information oriented policies, programs, research projects, and service efforts. As the term "information equity" is used here and throughout the paper, it refers only to equity with respect to information in the field of education. To consider equity with respect to all information is beyond the scope of this paper.

One of the major obstacles in providing the necessary conceptual clarification is the lack of agreement concerning the meaning of equity. Often used interchangeably with equality, equity can be interpreted in a variety of ways. The initial step in clarifying information equity, then, is an analysis of the various interpretations of both equity and equality.

The second step will be to analyze information related concepts, e.g., knowledge, information, information users, information needs, dissemination, utilization, and apply to them appropriate equality and equity interpretations. The outcome of this synthesis of equality/equity interpretations with information concepts will be the identification of possible information equity interpretations. Each of these interpretations involves practical as well as conceptual issues which must be considered if the concept is to be translated into coherent, workable policies and programs.

The purpose of the paper is thus threefold:

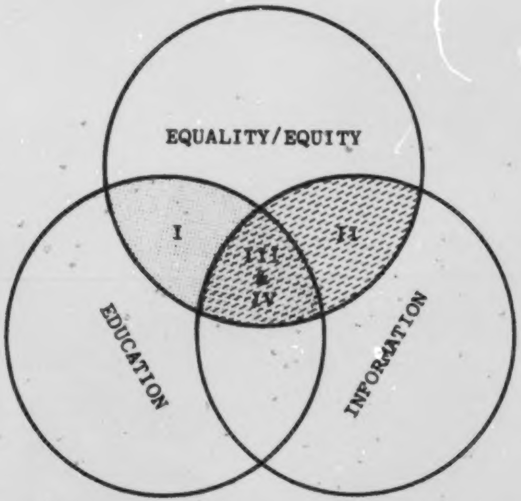
1. Clarify the concepts equality and equity.
2. Clarify the emerging notion of information equity.

3. Identify the issues involved in translating information equity interpretations into actual programs and policies.

The paper has been divided into three major sections, plus a concluding recommendation section. Schematically, this can be viewed as:

Figure 1

The Relation of Concepts of Equality/Equity, Education, and Information



Part I analyzes the concepts equality and equity and determines the possible interpretations attributed to each, focusing whenever possible on the intersect between equality/equity concepts and education oriented concepts. Part II analyzes information equity, focusing on the clarification of information related concepts and the synthesis of these concepts with equality/equity interpretations. Part III illustrates possible programs and policies (in the field of education) representative of different information equity interpretations and examines the actual and potential problems associated with them. Part IV discusses information equity policy recommendations.

PART I

EQUALITY AND EQUITY: CONCEPTUAL DISTINCTIONS AND CLARIFICATIONS

Introduction

In order to analyze and clarify information equity, it is essential to have a thorough understanding of the more general concepts of equality and equity, upon which information equity is based. Both equality and equity involve a number of complex distinctions and interpretations which must be examined prior to an analysis of information equity.

Though common to our normal discourse, the concepts of equality and equity remain confused in their meaning and inconsistent in their application. In many instances, particularly research proposals, policy statements, and government program descriptions, "equality" and "equity" are used interchangeably as though they were different words for the same concept. In other cases, however, they are assumed to represent different, though related concepts. It is this latter position which is assumed at the outset of this paper.

The conceptual analyses of equality and equity will proceed in the following manner, indicating the major distinctions and interpretations associated with both concepts:

- Equality and Equity: Sameness and Fairness--identification of "equality" with "sameness" and "equity" with "fairness"
- Formal Equality and Equity--determinate principles of equality and equity
- Substantive Equality and Equity--indeterminate, context-dependent principles (interpretations) of equality and equity
    - Substantive Equality and Equity: Opportunity/Access
    - Substantive Equality and Equity: Treatment/Input
    - Substantive Equality and Equity: Results/Output

Equality and Equity: Sameness and Fairness

Introduction. The distinction between equity and equality is a murky one and, in fact, the concepts are quite often used interchangeably. Historically, however, at least a slight conceptual distinction can be detected. Equality tends to be associated with sameness. Equity tends to be associated with fairness and/or justice, often focuses on distributive justice and problems of economics and finance, and "denotes the preferred shape of the distributional curve or just distribution of economic resources in society" (Hewlett, 1971, p. 31). For example, while much of the educational literature heavily employs the term "equality," school finance literature is more likely to refer to "equity." This point is well illustrated by Berke and Moskowitz (1976). In their discussion of research in school finance, references are made both to equity in taxation and equality in educational opportunities. Gans (1968) distinguishes between the goals of equality and equity, claiming that equality has to do with "sameness of results" while "equity, or fairness, concerns the relationship between one person's work or other effort and the reward for that effort, and another person's effort and reward" (pp.73-74).

This distinction between equality (sameness) and equity (fairness/justice) is not without both ancient and contemporary counterexamples, however. Aristotle claimed that "all men hold that justice is some kind of equality" and in A Theory of Justice (1971) Rawls develops a notion of justice as fairness which emphasizes equality.

Nor are the concepts exclusive of one another. In an analysis of the effects of school finance reform, Rand Corporation researchers claim to have identified two concepts of equity, one of which is "equalization"[1] ("Equity: School Reform's Elusive Goal," 1979 p. 57).

In many discussions, the terms are apparently assumed to be synonymous or as Connor (1977) refers to them--quasi-identical (p. 163). It is not clear whether this is because equity has been narrowed to mean sameness, one meaning it does in fact have, or because equality has been expanded to include fairness and/or justice.[2] In either case, the distinction, though slight, will at least initially be preserved here.

Equality as Sameness. In the mathematical claim "x is equal to y" the meaning of "equal" is clear: x and y are the same (identical, uniform) with respect to certain designated characteristics. In this example, "equal" is associated with "same" and is used in its descriptive sense; it describes the relationship between x and y, the determination of which is a matter of empirical verification.

In associating equality with sameness it is important to distinguish between the two uses of "same": identification and comparison. The identification function of "same" identifies or designates a particular object or person, e.g., this is the same bridge I crossed yesterday. This use of "same" has no association with "equal." The comparative function, on the other hand, allows for the contrasting of objects or persons, e.g., this coffee cup is the same as that one. It is only this comparative function of "same" which is applicable to "equal."

According to Komisar and Coombs (n.d.), one interpretation of equal is equality as sameness, "equal" and "same" being synonymous when "same" is interpreted in its comparative sense. Such a claim of synonymity can be challenged as too strong, even though most people would acknowledge a close association of equality with sameness. Bedau (1967) claims that "equal" and "same" are not always synonymous, even in their descriptive (comparative) function. "Equal" does, however, imply "same," allowing a coordination of the concepts of equality and sameness.

The association of equality with sameness, whether interpreted in the strong (Komisar and Coombs) or weak (Bedau) sense, has limited application. Both views emphasize that the determination of equality (or sameness) is made on the basis of specific characteristics or factors. That is, according to Bedau (1967), even though "equality does imply sameness, persons or things equal in one respect need not (usually, most not) be equal in all others" (p. 12).

With respect to what, then, is x equal to (same as) y? Who determines what these characteristics or factors are to be, and upon what basis? Until it is specified in what way x and y are equal (or should be equal), the notion of equality as sameness remains incomplete and almost meaningless in terms of application. This suggests that while sameness may be part of what is meant by equality, it does not represent the totality of the concept.

Equity as Fairness. Much in the same way that equality is associated with sameness, equity is connected with fairness (or justice).[3] Equity and fairness are far from synonymous, however, the connection being more of an association; part of an equitable distribution, for example, is that it is fair.

The implication of equity is that fairness does not always mean same (equal). The requirement of an equitable distribution may, in fact, be used to justify inequalities, depending, of course, on the interpretation given to equity. The difference between equality and equity, then, is a matter of emphasis. While fairness has priority in equity judgments, sameness appears to be given priority in equality judgments. However, given the numerous "qualifications" that are placed on actual equality and equity interpretations, this difference is minimal. This will become apparent in the following analyses.

Formal Equality and Equity

Equality has traditionally been interpreted as indicating a general principle (or principles) concerning the treatment of individuals. Such principles are considered formal in the sense that they consititute general precepts, as exemplified by Aristotle's principle, "Equals are to be treated equally; unequals unequally." Modern formulations of the principle have varied only slightly.

Negative Formulation:

> ...none shall be held to have a claim to better treatment than another, in advance of good grounds being produced (Benn and Peters, 1969, p. 57).[4]

Fair Treatment (Context-Independent) Formulation:

> ...the rules governing the lives of human beings be impartially applied to all, that each man is to count as one and that no one is to count for more than one, that all similar cases are to be treated in the same way, that no person shall be given better treatment or special consideration or privilege unless justifying reasons can be given for such differentiation (Blackstone, 1965, p. 70).

Principle of Equality Formulation:

> All persons are to be treated alike, except where circumstances require different treatment (Beardsley, 1969, p. 191).[5]

Formal or Procedural Equality Formulation:

> (a) Good reason has to be shown for treating one person or group of persons differently from any other person or group of persons. In the absence of such a reason all persons or groups of persons should be treated similarly.
> (b) Like cases are to be treated as like, and unlike cases as unlike (Weale, 1978, p. 11).

Each of these formulations associates "equal" with "same." They are slightly more specific than "equality as sameness," specifying that "same" refers to "treatment." The requirement of equal treatment is qualified, however, the provision being made that "good reasons" must be shown for not treating people in the same manner, that only similar cases are to be treated equally, and so forth. An obvious shortcoming of these formulations is that they fail to specify how these qualifications are to be applied. Formal principles do not indicate specifically how people should be treated or how equality and equity principles should be applied. They thus involve minimal disagreement. They also are fairly meaningless without additional explanation.

Equivalent formal equity principles are less easily found. While the concept of equality is prevalent both in everyday discourse and social, political, educational, and philosophical literature, references to equity remain far less frequent. It is, however, a term growing in popularity and use, although the literature is only now beginning to reflect this trend.

Substantive Equality and Equity

In contrast to formal equality and equity principles, substantive equality and equity include those principles which explain or prescribe how particular members of society are to be treated. Principles of this type are indeterminate; they are context-dependent. It is at this more specific level that disagreements concerning the meaning of equality or equity normally occur.

Disagreements can be of different types. Generally they are normative (value related) and, according to Blackstone (1969c),[6] tend to focus on:

1. General criteria of relevance
2. Explanation of given criterion
3. Priority of certain general criteria

The majority of these disagreements can ultimately be traced to different positions regarding the justification for differential treatment (or opportunity or results) i.e., what characteristics and/or factors are relevant in justifying treating people in different ways. By "relevant" is meant

> x is actually or potentially related in an instrumentally helpful or harmful way to the attainment of a given end and consequently ought to be taken into consideration in the decision to treat someone in a certain way (Blackstone, 1969c, p. 117).

The determination of relevance has both an empirical (descriptive) and evaluative (prescriptive) component. Whether x (quality, characteristic, circumstance) is instrumental in attaining a given end is a matter of fact, and thus capable of verification. Whether a particular x (quality, characteristic, circumstance), once determined to be relevant, should be considered and/or a given end accepted is a matter of value; it is prescriptive.[7]

Criteria of relevance for differential treatment normally focus on need and/or merit, and somewhat less often on capacity and/or worth. Although these terms are frequently used in common discourse, they represent a central source of disagreement, each requiring detailed specification (normally within a given context). Burbules, Sherman, and Lord (1979) differentiate "merit" and "need," with respect to Blackstone's definition of "relevance," on the basis that characteristics of merit "are those personal features which are helpful to the attainment of the given end; characteristics of need are those which are harmful" (p. 13). They further differentiate "merit" on the basis of ability, effort, and achievement.

Ralph Tyler (1949) distinguishes two meanings of "need":

> The first use of the term represents a gap between some conception of a desirable norm, that is, some standard of philosophic value and the actual status. Need in this sense is the gap between what is and what should be. The other use of the term by some psychologists represents tensions in the organism which must be brought into equilibrium for a normal healthy condition of the organism to be maintained (pp. 7-8).

It is the first meaning--the gap between what is and what should be--which is applicable to discussions of equality and equity.

Childers and Post (1975) offer a broader definition of "need," defining it in terms of necessity, obligation, want, lack of something wanted, and lack of something required.[8]

Capacity and worth are less often referred to in discussions of equality and/or equity, although they are often assumed or are subsumed under extended notions of merit. "Capacity" refers to an individual's ability and/or capabilities; "worth" refers to an individual's value.

Disagreements concerning substantive equality and equity thus often revolve around selecting criteria of relevance, establishing a priority for these criteria, and defining or explaining what is meant by each criterion. There are, however, other, often interrelated areas of potential disagreement. For example, Oppenheim (1968) lists a variety of what he has labeled "traditional criteria of egalitarianism," including: impartiality, equal shares to all, equal shares to equals, proportional equality, unequal shares corresponding to relevant differences, and to each according to his/her dessert.

Disagreements are not limited to only these areas. Considerable controversy also revolves around whether or not treatment should be the primary focus of attention. Three separate substantive concepts of equality are predominant in current equality literature: equality of opportunity, equality of treatment, and equality of results. Three equivalent substantive concepts of equity are predominant in current equity literature: equity of access, equity of input, and equity of output. Each of these concepts, in turn, involves alternative, often conflicting, interpretations (positions).

Substantive Equality and Equity: Opportunity/Access

Equality of Opportunity. The concept of equality of opportunity is perhaps the most common of the three substantive concepts of equality (opportunity. treatment, results) in current equality literature, particularly in the field of education. The general thrust of the concept is the provision of access to particular treatment(s).

Assuming "equality as sameness," the initial step in a conceptual analysis of equality of opportunity is a clarification of the meaning of "opportunity." Robert Ennis (1976) claims that

> Roughly speaking X's having an opportunity to do Z consists of the presence of positive factors combined with the absence or insufficiency of negative factors. The positive factors are environmental facilitators; that is, environmental features that would enable (or help) X to do Z... Negative factors, the insufficiency of which is the other constituent of X's having an opportunity to do Z, are environmental factors that could deter (or are deterring) X from doing Z (p. 9).

According to T.D. Campbell (1974/75)

> An opportunity may be said to occur when an agent is in a situation in which he may choose whether or not to perform some effortful act which is considered to be desirable in itself or is a means to the attainment of some goal which is considered to be desirable (p. 51).

Burbules, Sherman, and Lord (1979) alter the Campbell definition somewhat, including a distinction between external factors (environmental conditions of access and personal criteria of access) and internal factors.

> A person has the opportunity to do X if and only if, given the existing conditions of access and the criteria of access which the person possesses, the person's willing to do X would be sufficient for his/her doing X (p. 20).

Agreement on the meaning of "opportunity" is an initial step. Agreement on the focus area, e.g., education, and its constitution is equally important i.e., equality of opportunity with respect to what or for what.

Reaching consensus on this issue is not an easy task. For example, given the focus area education, to what does equality of educational opportunity refer? A number of responses can be put forth:

1. Access to schooling
2. Development of individual abilities, talents, and/or virtues--potential
3. Development of basic social and intellectual skills[9]
4. Chance for success[10]

Another source of disagreement involves which factors to consider in determining whether an individual has an equal opportunity. An initial distinction is generally made, in theory, between environmental (external) and personal (internal) factors, and in the view of some people, only environmental factors "are constitutive of having an opportunity" (Ennis, 1976 p. 9). In practice, the distinction remains obscure and a matter of considerable debate. For example, Ennis (1976) includes as personal factors "motivation, traits, abilities, decisions, ideas, beliefs, and goals of the person involved" (p. 9). But as he points out, while motivation may be considered personal, it may be interrelated with environmental factors. If, for example, Tom and Susan are of equal ability and each expresses an interest in a medical career, and Tom decides to enter medical school while Susan decides to enter secretarial school, one person can claim Susan had an equal opportunity (with Tom) to apply but lacked sufficient motivation while another person could claim she did not have an equal opportunity (with Tom) because as a female she was discouraged in her medical aspirations; therefore, her lack of motivation was a result of prior environmental factors, e.g., her socialization. As Harvey (1978) points out,

> Although we may want to consider certain innate abilities as being generally unaffected by the environment, we may question the separation of beliefs, ideas, goals and motivation from their social context (p. 147).

Still another source of disagreement involves the justification of differential opportunity i.e., on what basis can differences among types of opportunities and the provision of opportunities be justified? Disagreements of this nature are similar to those discussed in the Substantive Equality and Equity section:

1. What characteristics are relevant in allowing differential opportunities?
2. What is meant by "relevant"?
3. What criteria of relevance will be used?
4. What is meant by "need," "merit," "capacity," etc.?
5. What priorities are stipulated within the criteria of relevance?

The position taken on each of these questions will, in part, determine the overall stipulated meaning of equality of opportunity.

The range of possible interpretations given to equality of opportunity is obviously extensive. Burbules, Sherman, and Lord (1979) have, however, differentiated and explained three general interpretations which can be used in categorizing these positions: formalism, actualism,[11] and equal results. The notion of equal results is not, however, a form of equal opportunity--a point Burbules et al. correctly make--and is therefore treated here as a separate and distinct concept.

Formalism rests on the notion of "equality as sameness," prescribing that access to x (a benefit and/or treatment) should be equal i.e., the same. Whether an individual has the necessary background and/or ability to take advantage of this access is not an issue; that depends on individual effort, responsibility, and motivation. Compensatory programs are not a primary concern. The emphasis is on merit--not need--and characteristics deemed relevant tend to be those limited strictly--and narrowly--to the immediate treatment or benefit being considered. Burbules et al. illustrate this category through a reference to the Bakke case, claiming

> A formalist stance in the Bakke case,...would imply that one should not use race as a condition of access to professional schools, even when the adoption of this condition might have good effects on the large scale (equalizing representation of minorities among the professions), if the condition is irrelevant to the practice of the particular profession itself (p. 33).

Actualism, on the other hand, emphasizes both the provision of equal access/opportunity (to some benefit and/or treatment) and the elimination of and/or compensation for barriers, restrictions, past inequalities, and so forth which hinder taking advantage of this access/opportunity. Individual differences and needs are important considerations, reflecting the view that not everyone will be equally able to take advantage of the opportunities which are (equally) provided without additional, appropriate, often compensatory opportunities (or treatment) first being provided.

Burbules et al. identify two types of actualism: compensatory and alternative. Compensatory actualism assumes common goals but allows for different means of attaining them. These different routes of access are normally based on need. Title I compensatory educational programs exemplify this approach. According to Berry (1978), formerly Assistant Secretary for Education, HEW, the program "provides support for compensatory education to meet the needs of educationally disadvantaged children in low-income areas" (p. 392), based on the belief that "such children need help beyond what is available from the regular school program...The educational goal of Title I is to provide supplementary services such as remedial help in the basic skills" (p. 392). Implicit to Title I are the assumptions of common goals--

the development of minimal skills, abilities, etc.--and the necessity of providing different means of attaining them.

Alternative actualism allows for both alternative routes of access and alternative--though equivalent--goals. One of the intentions of this view is to provide a sufficient number of alternatives so as to increase the chance that an individual will take advantage of one of them. It thus places great emphasis on individual differences and needs. In addition, it provides an option to compensatory actualism (and formalism) when compensation is not possible or will not be effective. For example, not everyone has the musical ability to become a concert violinist. Compensatory programs aimed at having everyone reach this level of musical ability would not be effective. An alternative goal would be exposure to music, music theory and history, etc. and the chance to play an instrument. This could be accomplished through a variety of courses, activities, etc.

Equity of Access. The notion of equity of access is less common than equality of opportunity, at least with respect to explicit statements of equity formulations, probably because of the economic orientation of the concept. There are, however, a range of possible interpretations of equity as access which are implicit to various equity oriented policies and programs.

The analysis of equality of opportunity provided above is similarly appropriate here and, therefore, need not be repeated. The only necessary revision is the switch from equality (sameness) to equity (fairness). This substitution is of only minimal consequence, however. When reference is made to equality of opportunity, the assumption is made that opportunities will be the same unless relevant reasons are shown for differences in routes of access. When reference is made to equity in access (or opportunity), the assumption is made that opportunities will be provided fairly--fairly implying that relevant reasons will be given for differences in routes of access. The meaning of "relevance" once again takes on importance, as does the meaning of "access" or "opportunity."

Generalized formalist and actualist positions remain essentially the same whether the focus is equity or equality. In both actualism and formalism the emphasis is on access to something--a benefit and/or treatment. The focus is on a type of input i.e., something that is provided/distributed to the individual. What the individual does with this i.e., the outcome, is not an important consideration. Such is the focus of equality of treatment and equity of input as well. In equality of treatment and equity of input, however, the position is taken that it is not access that should be of primary concern (or it is not only access), but the actual treatment itself.

Substantive Equality and Equity: Treatment/Input

Equality of Treatment. The notion of equality of treatment reflects the Aristotelean tradition as discussed in the Formal Equality section. Once the formal principle of equal treatment has been formulated, e.g., "none shall be held to have a claim to better treatment than another, in advance of good grounds being produced" (Benn and Peters, 1969, p. 57), the substantive principle focuses on the constitution of treatment, relevance, good grounds, and so forth, the result being a variety of often conflicting positions (and meanings).

Any discussion of equality of treatment requires an initial determination of the constitution of treatment. Beardsley (1969) refers to "treatment" as a general term which

> can include particular actions as well as general practices, or modes of treatment...covers all distributions of goods and ills, and all rules and regulations (p. 191).

This notion of treatment, however, is too broad and requires additional clarification. Taken in this general sense, no indication of what categories or types of practices, actions, distributions, rules, and/or regulations is provided. Yet, it is unlikely that anyone intends to require that all practices, activities, and so forth be considered and evaluated with respect to equality. Certain actions, practices, rules, etc. are valued more highly by members of society than are others and these normally provide the focus of equality discussions and disputes. They tend to reflect both needs and wants and can often be categorized into focus areas, e.g., political equality, economic equality, educational equality. A substantive principle of equality of treatment must therefore be particularized to the context to which it is to be applied--equality of treatment with respect to what. Once this has been clarified (normally stipulated), a justification for differential treatment must be considered i.e., under what conditions is it justifiable to treat people differently? It is at this point that criteria of relevance are important. Is differential treatment justified on the basis of need, merit, worth, capacity, or some other criterion?

There exists a range of possible positions with regard to equality of treatment. These positions are a function of:

1. Definition and parameters of "treatment"
2. Specification of focus area i.e., equality of treatment with respect to what?
3. Explanation of meaning and domain of focus area, e.g., what is meant by "education," what activities and services are to be considered in assessing equality of treatment with respect to education? Alternately, what is meant by "information," what activities and services are to be considered in assessing equality of treatment with respect to information?
4. Criteria of relevance to substantiate differential treatment
5. Explanation and priority of criteria, e.g., merit before need

The response or position given with respect to each of these topic areas is, in part, a matter of values. Each of these topics, thus, presents a source of potential disagreement. Even a cursory consideration of the possible responses to each of these topic areas indicates the variety of positions or interpretations which can be taken, each claiming to represent (or be founded upon) the concept of equality of treatment.

Consider the following two examples focusing on equality of treatment with the focus area being education i.e., equality of treatment in education:

Example I

1. "Treatment" is interpreted in a general sense similar to that discussed by Beardsley i.e., practices, actions, distributions, rules, and regulations (within the context of education).
2. The focus area is education.
3. "Education" is interpreted in a modified institutional sense, including preschool through post-secondary levels and allowing consideration of extracurricular, compensatory, and community-based activities for their educational potential.
4. Selection of relevant characteristics in justifying differential treatment is on the basis of need.

Example II

1. "Treatment" is interpreted in a limited sense, referring to the rules which regulate the provision of educational services.
2. The focus area is education.
3. "Education" is interpreted in a strictly institutional (and legal) sense, applying only to grades K-12, or ages 5 through 16.
4. Selection of relevant characteristics in justifying differential treatment is on the basis of merit.

In the latter example if the rules which regulate the provision of educational services are equally applied and, presumably, if some kind of formalized education is equally provided to each child between the ages of 5 and 16, the principle of equality of treatment in education is satisfied.

Differences in the quality of education received is not at issue since "treatment" has been limited to rules regulating the provision of educational services. Differential treatment in the provision of educational services is justified on the basis of merit i.e., those who indicate superior ability, achievement, aptitude, etc. may be legitimately provided additional educational services.

In the former example, on the other hand, "treatment" includes educational practices, activities, distribution, rules, and regulations. By thus broadening the scope of "treatment," the principle of equality of treatment in education requires not only that educational services be provided or distributed equally but that the practices, actions, etc. constituting these services be provided equally as well. Broadening the scope of "education" additionally requires examination of the availability of less traditional educational services to supplement formal education. Differential treatment is justified on the basis of need, regardless of achievement, aptitude, etc.

Both examples claim to represent equality of treatment. In one case the focus is on minimal provision of educational services, allowing differential treatment on the basis of merit. Student needs are ignored as are inequalities in the quality of educational services. In the other case, some consideration of quality of education is allowed and student needs are given priority in providing differential treatment. The range of possible positions is even broader, however. Enforcement of compulsory education laws may be sufficient for one position; total equality with respect to all aspects of education, e.g., distribution, quality, resources, etc., may be required by another.

Equity of Input. Equity of input is again similar to equality of treatment. The term "input" is used here as equivalent to the equality oriented term, "treatment," in order to provide some consistency between equality and equity positions. "Input" is a distributional term, adapted here to include treatment. (Later in the discussion of equity of output, "input" will be used in a more limited sense.) Input on the part of an individual can include such things as abilities, effort, intelligence, resources, skills, and so forth. Input on the part of an organization, institution, or program can be even more broadly interpreted, e.g., pupil expenditures, libraries, quality of teachers, teacher morale, equipment, attendance regulations--all can be viewed as inputs to education.

Part b of the Formal or Procedural Equality Formulation (p. 7), "like cases are to be treated as like, and unlike cases as unlike," is what Weale (1978) labels the "procedural requirement of consistency." This requirement, he claims, is "identical with the principle of equity" (p. 22).

A similar position can be inferred from the notions of horizontal and vertical equity. Horizontal equity refers to "equal treatment of people in equal positions"; vertical equity refers to "unequal treatment of people in unequal positions" (Lampman, 1977, p. 19).

According to Weale (1978),

> equity arguments are normally used in a context where one social group is being benefited relative to another. The point of an equity argument is not so much to stress the concept of consistency, but rather to indicate the proper reference groups between whom consistency should be maintained. The normal method of arguing is to say that one group should be better treated than it is because another group like it in relevant respects receives better treatment (p. 28).

The possibility of differential treatment which this suggests is in some ways more compatible with equity than with equality, primarily because equality is associated with sameness while equity is not (or not by necessity). The problems associated with differential treatment remain essentially the same as those discussed in connection with equality, however. On what basis are people to be judged of equal position? What characteristics and considerations are relevant to this determination? What constitutes the criteria of relevance? What function and priority are assigned to need, merit, worth, and/or capacity? The complexity of these issues is immense and the responses given determine the final position taken. For example, consider the "treatment" (or input) of preferential hiring. If a more representative ratio (based on race, sex, ethnic group, etc.) of workers is considered a relevant consideration in hiring practices, preferential hiring can be justified. Preferential hiring practices normally rely on criteria of relevance involving both need and merit; those treated preferentially belong to groups determined to be underrepresented, usually as a result of past and/or current inequities (need), and meet the necessary standards to warrant being hired (merit). If, on the other hand, representative ratios are not deemed a relevant consideration and the only recognized criteria is merit, preferential hiring policies will be rejected. Both positions claim to be fair--and claim that the alternative position is not fair.[12]

Substantive Equality and Equity: Results/Output

Equality of Results. Advocates of positions based on some notion of equality of results argue that equality of treatment and/or equality of opportunity do not lead to equality among people; they can, in fact, perpetuate--and even increase--inequalities. In the words of Gans (1968),

> People who start their lives at a disadvantage rarely benefit significantly from equality of opportunity because, unless they are outstandingly superior in skills or in upward-mobility techniques, they can never catch up with the more fortunate, and most disadvantaged people never even get access to the supposedly equal opportunity (p. 64).

Equality of treatment is subject to similar criticism.

> ...to treat the disadvantaged uniformly with the advantaged will only perpetuate their disadvantage (p. 64).

Gans concludes, "the only truly egalitarian principle is equality of results..." (p. 64).

The notion of equality of results has become popular, particularly in educational literature, in part as a result of the work of James Coleman, and conceptually is often confused with equality of opportunity. In his 1966 Survey,[13] Coleman identified what he considered to be five different, predominant concepts of equality of educational opportunity, focusing on "inequality."

1. Inequality of community input to the school, e.g., per-pupil expenditure, school plants, libraries, quality of teachers, etc.
2. Inequality as a result of racial composition i.e., the Supreme Court ruled in 1954 that segregated schools are inherently unequal.
3. Inequality with respect to "various intangible characteristics," e.g., teacher morale, teachers' expectations of students, level of interest in learning, etc.
4. Inequality of consequences of the school for individuals of equal backgrounds and abilities.
5. Inequality of consequences of the school for individuals of unequal backgrounds and abilities.[14]

Of these five concepts, the first three are concerned with input. Depending upon interpretation, they can represent either equality of opportunity (as presumably Coleman intends) or equality of treatment. Numbers four and five are concerned with output--with results. Coleman (1975) claimed that this represented a "new stage in the evolution" of the concept of equality of opportunity and that the report

> brought into the open what had been underlying all the concepts of equality of educational opportunity that had remained largely hidden: that the concept implied effective equality of opportunity,...equality in those elements that are effective for learning (p. 210).

While Coleman may be correct that at least the spirit of equality of educational opportunity implies effective equality of opportunity, he is conceptually incorrect. Equality of results is a separate concept, results (outcomes) being different from opportunity or treatment (inputs). As Burbules, Sherman, and Lord (1979) have pointed out, implicit to "opportunity" is the notion of choice; to provide equality of educational opportunity means to provide equal access to educational benefits and treatments which the individual may or may not choose to take advantage of (given that the individual can, in fact, avail him/herself of the opportunity). Implicit to "results" is the assumption that the individual has chosen to take advantage of the (or some) opportunity. While others have also adopted this "conceptual merging" of results and opportunity with respect to equality of educational opportunity--Thomas Green (1971b) refers to equal achievement as the "benefit view of equal educational opportunity"--for reasons of clarity; simplification; elimination of possible sources of error, disagreement and/or confusion; as well as accuracy, the concepts should be recognized as separate and distinct.

Given equality of results as a separate concept, there exists a variety of possible interpretations which it can be given: same results, minimal achievement, same progress, proportionate results, and equivalent results.[15]

Same results is based on the view that outcomes should be equal, e.g., everyone has developed the necessary skills for using a variety of information systems. The primary difficulty with this position is the necessity of holding back some individuals in order to allow those of lesser or different abilities the chance to catch up.

Because not everyone has the mind or the ability of Albert Einstein, for example, alternative positions have been suggested. Minimal achievement or minimum attainment focuses on a minimum standard of achievement which has been judged to be reasonable.[16] The adoption of minimal educational competency standards by various states throughout the country represents this type of approach (although these programs tend to originate from different motivations than a concern for equality). Same progress focuses on equalizing the progress made by individuals given their individual differences, abilities, and so forth.

A somewhat different approach, proportionate results, focuses on proportionate representation and level of achievement. All levels of achievement should include proportionate representation of the significant groups within a society. Use of quota systems reflects the orientation of this position.

Equivalent results focuses on maximizing each individual's distinctive abilities. A variation of this position is implied by Gordon (1974) in his discussion of the research conducted by Stodolsky and Lesser. According to Gordon, Lesser claims to have identified "differential patterns of intellective function distributed by ethnic group identification" (p. 21). The school's charge is to maximize the use of each child's distinctive pattern of ability. Judgments of equality are made on the basis of adequate achievement with respect to the child's "special abilities area"--what can be labeled equivalent results.

Equity of Output. Given the tendency to interpret equity as a distributional term, equity of output positions generally focus on input-output ratios. Sampson (1975) describes the equity solution (to problems of distribution) as

> based on a principle that divides resources (e.g., outcomes of wealth, income, status, game points) according to defined inputs (e.g., ability, intelligence, hard work)...some persons are said to deserve more of the available resources because relative to others they have more invested (p. 48).

This position--what is considered the usual equity formulation--is interpreted by Deutsch (1975) as meaning that "the individual's relative input to the group outcome will determine his relative share of it (to each according to this contribution)" (p. 144). In terms of the previous discussion, the justification for differential output (results) is based on merit--what one contributes (input). (This is, however, a more limited interpretation of input than was used in the Treatment/Input section.)

Deutsch proposes an alternative equity formulation based on need. In this position input and output are, in a sense, reversed.

> ...input to the individual is of resources of production and his output to the system consists of activities involved in producing things of intrinsic value (consumer goods) or of instrumental value (economic goods or means of production) (p. 144).

The implication of this formulation is that

> in pure cooperative systems a person's share of economic goods should be determined by his relative skill in using such goods for the common weal and that he should share in the consumer goods with others according to need (from each according to his ability, to each according to his need) (Deutsch, p. 144).

Policies based on these formulations--both claiming to represent the true meaning of equity--would be radically different and would have radically different consequences. The usual equity formulation--input determines output--is a meritocratic approach consistent with the social Darwinistic principle that only the fittest (should) survive. It reflects the sentiments of one of social Darwinism's outspoken proponents, Herbert Spencer.

> The command 'if any would not work neither should he eat', is simply a Christian enunciation of the universal law of nature under which life has reached its present height--the law that a creature not energetic enough to maintain itself must die (Spencer, 1913, p. 151).

Taken to its logical extreme, this position leads to behaviors such as the Spartan custom of leaving weak and deformed babies in the wild to die. In its more normal application, it allows gross skews in distribution of even the most basic necessities. Additionally, as the history of social Darwinism indicates, it places no ethical or moral restrictions on the constitution of input, e.g., the use of cheap, child labor is considered input--not for the child but the person employing the child--thus allowing increased output, and an increased share of that output. Regardless of how "merit" is defined, a position based solely on merit results in the neglect of those individuals who do not "measure up," e.g., aged, sick, handicapped, illiterate.

Deutsch's position, on the other hand, emphasizes the distribution of output on the basis of need, regardless of input. Input is interpreted as resources (rather than individual effort, ability, etc.) and is allocated on the basis of ability to utilize these resources for the common good. The argument lodged against this view is that it fails to provide adequate incentives to individuals who possess the abilities to most effectively utilize resources, given that output is distributed on the basis of need, regardless of input.

Summary

Equality tends to be associated with sameness as in the mathematical claim "x is equal to y" where "equal" means x and y are the same with respect to certain designated characteristics. Equity tends to be associated with fairness (or justice). The implication of equity is that fairness does not always mean same (equal).

Formal principles of equality and equity constitute general precepts. They do not indicate specifically how people should be treated or how equality or equity principles should be applied. They thus involve minimal disagreement but remain fairly meaningless without additional explanation.

Substantive equality and equity include those principles which explain or prescribe how particular members of society are to be treated. Such principles are context-dependent. It is at this more specific level that disagreements concerning the meaning of equality and equity normally occur.

There are three separate substantive concepts of equality: equality of opportunity, equality of treatment, and equality of results. Similarly, there are three separate substantive concepts of equity: equity of access, equity of input, and equity of output. Each of these concepts involves alternative, often conflicting, interpretations.

In addition to conceptual disagreements concerning the meaning of equality and equity and their various interpretations, practical considerations in equality/equity discussions and disputes also provide numerous sources of possible disagreement.

Practical Considerations of Equality/Equity Positions

In his discussion of values underlying the notion of distributive justice, Deutsch (1975) identifies the following alternative values with respect to just treatment:

1. All receive outcomes proportional to inputs
2. As equals
3. According to needs
4. According to ability
5. According to effort
6. According to accomplishments
7. Equal opportunity to compete without external favoritism or discrimination
8. According to marketplace supply and demand
9. According to requirements of the common good
10. According to principle of reciprocity
11. None falls below specificed minimum[17]

That Deutsch is discussing distributive justice and only secondarily equality and equity indicates an alternative approach that can be taken in examining equality/equity issues and again illustrates the complexity of these concepts and the relationships among them. All of these interpretations of distributive justice or just treatment can also be viewed as equitable or equal treatment as well, depending on the conceptual distinctions and interpretations which are made, and, in fact, the majority of these positions have already been discussed (or implied) here. Implicit to the association of equity with fairness is the possible identification of equality and equity as principles of justice--which is what Deutsch implies. Since the purpose here is to examine and clarify the various possible principles of equality and equity, an examination of what Deutsch considers the still larger category--justice--is not necessary, and would, in fact, further complicate rather than simplify the task. His list, however, illustrates the complexity of the conceptual issues involved and begins to suggest the complex nature of practical considerations as well.

Clarification of concepts and conceptual distinctions and resolution of conceptual problems is essential to the formulation of coherent, consis tent programs and policies. However, regardless of the overarching concept chosen--equity or equality--and the particular interpretation assigned to it--treatment/input, opportunity/access, results/output--conceptual considerations remain at an abstract level. Even substantive principles, while more directive than formal principles, are limited in their capacity to indicate specific policy decisions. They stipulate what is meant (when clarified) and what (in general) should be done. They have little to do with actual implementation (how something should be done) or specific details of policies. Policy is composed of conceptual (theoretical) and practical aspects, both of which are equally integral to successful formulation and implementation.

The purpose of Part I has been to indicate the conceptual issues which must be addressed prior to considering practical application of equality/equity policies and programs. A thorough examination of practical considerations extends beyond the intention of this paper. The following general comments are indicative of the types of practical issues which must be considered in applying any equality/equity position to a particular context. Many of these issues will be addressed in more detail in conjunction with the analysis of information equity, thus indicating how these considerations are to be particularized to a given focus area (information in the field of education) within a specific context.

Central to all equality/equity positions is the question of feasibility. Is it possible to provide equality/equity with respect to some goal, be it in terms of opportunity/access, treatment/input, or results/output? Also central is the question of values and choice. Are the costs worth the benefits? Can or will society tolerate the consequences? Considerations such as these are voiced by Gans (1968), among many others.

> A completely egalitarian society strikes me as so utopian as to be beyond policy-oriented discussion. If all incomes were equal, it is doubtful that the most unpleasant and taxing jobs would be filled, and if all power were equalized, it is doubtful that any decisions could be made and any public activities could proceed...The major defect of complete equality is the defect of all single-value conceptions: if equality is the all-encompassing goal, then all other goals, ...become lower in priority, and no society can function by pursuing one goal above all others...The real issue, at least from the point of view of pragmatic social policy, is more equality, that is, how much present levels of inequality of income and power should be reduced (pp. 66-67).

It is certainly possible to disagree with Gans' conclusion, and the values underlying it, but the issues he raises are ones that must be considered. Regardless of the focus area and particular context of equality/equity policies and programs, practical considerations of cost-benefit and feasibility must be considered.

Given the goal of equality/equity with respect to some end, part of the consideration of feasibility and cost-benefit involves determination (and judgment) of obstacles (what Ennis refers to as "deterrents") to equality/equity. In the opinion of Horowitz (1977), "the obstacles to equity are a source of greater divergency of opinion than the goals of equity" (p. xiii). Given a particular interpretation of equality or equity, the determination of obstacles is essentially an empirical matter. However, the initial interpretation (position), which has already been discussed as a matter of values, will determine the parameters of factors to be considered. In addition, deciding which factors within these parameters to consider in this empirical determination is also partially a matter of values. Once obstacles have been determined, the decision (normally made on the basis of cost-benefit analysis) of whether to eliminate (or lessen) these obstacles is also a matter of values. Are the costs worth the benefits? That is, according to Harvey (1978),

> We might not disagree on which factors are to be held responsible for a lack of equal educational opportunity but rather on what our responsibility is to change these factors...it might not be that we are disagreeing due to value judgments we make in applying the concept to have an opportunity...we might be disagreeing on whether or not we choose to endorse (in full) such a concept (p. 149).

Cost-benefit and feasibility considerations are particularly important because equality/equity policies normally tend to directly or indirectly involve some sort of distribution. The goods and/or services, that is, the resources, to be distributed are of limited supply. That claims for equality/equity are being made indicate the existence of a demand for these resources. In discussing limited resources in the United States, Horowitz (1977) points out the empirical and evaluative (value) dimensions involved.

> ...the issues are quantitative at one level (How much of a reduction in living standards can advanced social sectors accept?) and qualitative at another (What amount of growth is the U.S. public willing to sacrifice to retain present standards of liberty and equity?) (p. 10).

Limited resources, primarily in the form of funding, is a definite consideration (and constraint) in equality/equity educational policies and programs. Given limited funds and the general goal of, for example, equality of educational opportunity, what are the most appropriate (normally meaning effective and efficient) foci for educational programs? Is it possible to provide every individual absolute (or relative/equivalent) educational opportunity? What would be the costs? How could this be implemented? If compensatory programs are included, to what extent and to what point are individuals compensated? Is compensation in the form of intervention into family life, for example, ethically permissible, even if feasible? Is the general goal of equality of educational opportunity even feasible, given other societal inequalities? As Noonan (1974) points out,

> A general principle must be recognized: that severe, material and intellectual deprivation suffered in the early years can never be completely compensated by measures taken in later years (p. 88).

Compensatory programs necessarily involve the problem of infinite regress i.e., wherever the point of intervention (compensation), the claim can always be made that opportunities are still not equal because inequalities existed prior to that point.

Integrally linked to these considerations--and to the determination of obstacles (deterrents) to equality/equity--is the notion of needs. Whose needs? How are they to be determined, measured, and assigned priority? What is the function of needs in equality/equity policies? These are difficult questions. The notion of needs is itself complex, as has already been discussed. And as Thurow (1975) suggests, determination of its parameters is problematic; it is, in a sense, expanding. That is, according to Thurow, "Anything to which we have grown accustomed and that is generally available becomes a necessity. Needs thus defined, grow right along with average incomes" (p. 27). More extensive consideration of needs with respect to information equity is included in Parts II and III.

If merit, rather than or in addition to need, is considered, similar questions must be addressed. What constitutes "merit"? How is it to be measured and evaluated? How is priority among "kinds" of merit established?

These are just a very few of the kinds of issues that must be considered in translating equality/equity positions (interpretations) into practice. These issues are always context-dependent. Discussion in a paper of this type must therefore remain general. Parts II and III, however, will indicate how conceptual and practical considerations are to be applied to a particular focus area--information. In preparation for this, the following samples illustrate some of the kinds of practical issues that must be considered, given a particular interpretation of equality/equity (and a focus area):

Focus Group

Who are the primary focus groups, e.g., women, racial, ethnic, disabled/handicapped, immigrants/migrants, geographically remote, poor, elderly, non-English speaking, institutionalized?
How are members of focus groups to be identified?
Which of these groups are given priority?

Needs (presuming the interpretation emphasizes need)

Whose needs are to be considered, e.g., society, individual, focus group?
Which and whose needs are given priority?
How are needs determined?
How are needs measured?
How are needs evaluated?
What is the balance between social and individual responsibility in meeting these needs?

Feasibility

What are the specific goals?
Who determines these goals and upon what basis?
Are they realistic (or utopian) in the short term? Long term?
How are goals to be met?
On what basis has it been determined that the proposed programs/policies will be successful in meeting specific goals and the overarching goal of equality/equity?
What are the foreseeable consequences, both for "recipients" and "non-recipients"?
Who benefits and who does not i.e., who are the "winners" and "losers"?
In economic terms, what goods and services are being distributed and to whom?
Given finite resources, from whom are these goods and services being taken in order to redistribute them?
What are the predicted costs in terms of time, money, staff, resources, etc.?
Are the costs worth the benefits?
Who is to decide whether the costs are worth the benefits?
What are the potential funding problems?
Have the goals been reached by consensus i.e., is there general support for the intent of the program/policies?

Evaluation

On what basis are the programs/policies to be evaluated?
Whose criteria are represented and why?
What constitutes success and failure?
On what basis will programs/policies be continued or discontinued?

Numerous other categories of questions can be added, in addition to a variety of specific questions. The above list is intended only as a guideline. These and other issues will be considered in more detail throughout Parts II and III.

PART II

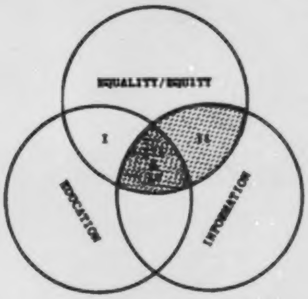
INFORMATION EQUITY: CONCEPTUAL DISTINCTIONS AND CLARIFICATIONS

Introduction

As has already been suggested, information equity is an emerging concept, lacking adequate formulation, clarity, and direction. The purpose of Part II is to provide this formulation (or range of possible formulations), clarification, and direction through a conceptual analysis of information equity.

In analyzing information equity, two major concepts must be examined: information and equity. (In addition, since this is a new, developing concept, the substitution of equality for equity must also be considered.) Equity provides the guiding (formal/substantive) principle for how information is to be distributed, made accessible, utilized, etc. Information denotes the focus area about which equity is concerned; it establishes the parameters of the context.

There are a number of clarifications and distinctions which must be made in providing a conceptual analysis of information equity in addition to those made in Part I. These focus on information related concepts, e.g., knowledge-information distinctions, dissemination, utilization, information needs, information users. With respect to the diagram on page 2, the focus is on the intersect between equality/equity concepts and information i.e.,



In stipulating that information refers only to educational information, the primary focus will be on the intersect of education, equality/equity concepts, and information. The information "sub-concepts" requiring clarification are not, however, unique to educational information. They are information concepts requiring clarification regardless of the type of information to be emphasized in equality/equity policy considerations.

Once the information sub-concepts have been clarified, it is possible to combine these analyses with the various equality/equity positions determined in Part I. This will provide a range of possible information equity interpretations. These interpretations are, however, theoretical; they explain the possible meanings of information equity in the abstract. Translating these interpretations into practice involves additional considerations. There are a variety of practical issues (and problems) that must be considered in the formulation of information equity related positions, policies, and programs. These provide the focus of Part III--Formulation and Implementation of Information Equity Policies and Programs.

Information/Knowledge

Traditionally, the study of knowledge--epistemology--has fallen within the domain of philosophy and has provided philosophers with a central area of investigation and inquiry. Epistemological concerns, however, are beyond the scope of this paper.[18] Information and knowledge, as they are used here, refer to terms most commonly associated with information science--not philosophy. The concerns are, therefore, somewhat different, as are the distinctions.

There are various ways of conceptualizing information and differentiating knowledge from information. Hood (1979) offers the following distinctions and definitions:

Data: coded symbols, signs, numerical indicators, or unprocessed stimuli

Information: data subjected to some form of processing, e.g., recoding, summarization, collation

Intelligence: information communicated to others, usually with accompanying interpretation or evaluation of meaning and/or pertinence

Knowledge: (broad sense) total body of data, information, intelligence, and technology and their organizing structures and principles.[19]

Paisley and Butler (1977) assume a somewhat different approach providing both a structural and a functional definition of information. In its structural sense, information is defined as

> an encoding of symbols (e.g., letters, numbers, pictures) into a message of any form, propagated through any medium), and processed by any sensory receptors (p. 13).

In its functional sense, information is defined as "any stimulus that modifies cognitive structure in the receiver (i.e., information user)" (p. 21).

In a similar functionalist-structuralist merging, Childers and Post (1975) define information as

> the material that is used in knowing, making decisions, taking action, thinking, and learning. It is the material that is 'known'; it is not 'understanding.' It is discrete pieces of meaningful data; it is not concepts and skills (p. 13).

Representing a "purpose-oriented" approach, the definition offered by Klees (1974) reflects aspects of all three of the previous definitions.

> Information may be thought of as the result of the coordination of data with knowledge. Data, which consists of empirical observations on the environment, must be manipulated in accordance with certain principles (knowledge) that relate it to a specific use to result in information (p. 15).

All these definitions essentially reflect a similar concept of information--processed data which alters the cognitive structure of the user--a concept which remains extremely general in nature. It is because information encompasses such a broad terrain that the focus has been limited to educational information.

Information Users

Similar to the discussion of context-dependence with respect to equality and equity, defining information partially in terms of function requires an examination of information within a specified context i.e., who uses the information for what purposes? Although the focus here is only on people (users) within the field of education, when interpreted broadly, this includes a vast array of types of users.

One way of categorizing information users is on the basis of whether they are ultimate or intermediary users. Intermediary users are those individuals who normally "pass on" information to someone else (eventually the ultimate user). Intermediary users include teachers, librarians, counselors, curriculum developers, and so forth. Ultimate users are, as the category suggests, those individuals for whom the information is ultimately designed or to whom it is ultimately directed. In education, ultimate users tend to be students and parents although the category is not exclusive of teachers, counselors, etc.--those normally designated as intermediary users. Whether a user is intermediary or ultimate depends on the particular context.

Categorization of users as intermediary and ultimate is limited in its ability to clarify the notion of users. Within both these categories it is possible to determine another group of categories--those based on roles. Paisley, Cirksena, and Butler (1979) focus on three general role categories of educational information users: student role, public role, and professional role. The student role is self-explanatory, focusing on the student as a consumer of education and educational information. The public role encompasses parent, citizen, voter, and taxpayer roles. The professional role includes those who work in the field of education, e.g., teachers, administrators, researchers.

Klees (1974), being somewhat more specific, focuses on six main groups of educational information users which he considers to have different orientations and needs:

> (1) consumers of educational services (parents and children), (2) new schools, (3) established schools, (4) researchers, (5) other evaluative groups (interest groups, legislative bodies, commissions, general public, etc.), and (6) regulatory agencies (pp. 15-16).

Klees does not discuss these groups (categories) in terms of roles but they do, in fact, reflect this categorization. Rather, Klees discusses them in terms of orientation and needs. When focusing on needs, however, an additional level of categories can be determined. Needs are not only contingent on role categories. They are also related to membership in what may be considered groups with special educational needs. These groups, what will be labeled here "focus groups," include women, racial, ethnic, disabled/handicapped, immigrants/migrants, geographically remote, poor, elderly, non-English speakers, and institutionalized.

In looking at information users, then, several categories must be considered.

1. Intermediary User/Ultimate User
2. Roles: Student/Consumer Role, e.g., student/learner, client
   Professional Role, e.g., teacher, administrator, researcher, evaluator, counselor, librarian, curriculum specialist
   Public Role, e.g., evaluative groups, taxpayers, parents, regulatory agencies
3. Focus Group/Special Needs, e.g., women, racial, ethnic, disabled/handicapped, immigrants/migrants, geographically remote, poor, elderly, non-English speaking, and institutionalized

This categorization is complex. In its simplest form, an information user will fall within each of the three major categories. For example, a female librarian would be categorized as intermediary user, professional role, woman (focus group). This, however, does not account for the fact that the librarian in the above example is also a taxpayer, parent, member of an ethnic group, handicapped, and non-English speaking. Individuals can and usually do have multiple roles, even when the roles are limited to student/consumer, professional, and public, and they can often belong to more than one focus group. This "multiplicity" within categories is particularly true with respect to special needs groups, given their diversity, and adds a complicated dimension to the notion of information users.

Identification and classification of information users therefore takes place on two levels:

a. Information users in relation to the three primary categories--intermediary/ultimate user (what can be labeled "function"), role, focus group/special needs

b. Information users within each of the primary categories ("sub-categorization")

(Membership in a particular category or sub-category may not always be determined to be significant with respect to an individual qua information user. For example, the above mentioned librarian may be a member of an ethnic group and a woman (both focus group/special needs) but neither may be judged significant in identifying her as an information user.)[20]

Information Needs

Each of the categories of users involves different information needs. The complexity of the notion of needs has already been discussed in Part I, as have some of the issues which must be considered with respect to needs. When placed in the context of information and given the above listed categories of users, a number of difficult questions arise. Is "need" defined in terms of necessity, obligation, want, lack of something wanted, lack of something required, etc.? What principle of need, if any, should be adopted with respect to information equity? Whose information needs take priority? How are conflicts in needs mediated and resolved? How are information needs determined? How are they evaluated?

Possible definitions of "need" were discussed on pages 9 and 10 in Part I. In their discussion of information needs, Childers and Post (1975) defined needs in terms of all of the above i.e., necessity, obligation, want, lack of something wanted, and lack of something required. Even if this were limited somewhat, the "essence" of need--the gap between what is and what should be--encompasses so much that the determination of needs becomes a central problem in information equity oriented policies and programs.

Part of this determination involves the function need is to play with respect to equity. That is, is need the basis of the criteria of relevance used in justifying differences in access, treatment, and/or results? Also part of this determination is specification of whose needs are being considered and how these are to be identified. Each of the user categories previously discussed will have particular information needs associated with it. The information needs of intermediary users can/will differ from those of ultimate users; the information needs of teachers (professional role) can/will differ from those of students (student/consumer role); the information needs of the poor (focus group/special needs) can/will differ from those of the disabled which can/will, in turn, differ from those who are both poor and disabled. In addition, individuals within these categories will have their own unique information needs, based on ability, interest, purpose, experience, and so forth.

The number of possible permutations of users and needs is staggering, even without the introduction of still two other classifications of needs: community and societal needs. While composed of individuals, who in turn fall within the specified user categories, the community and the society represent unique entities themselves. Each presents its own information needs. These needs can be in conflict with the needs of those individuals who make up the community (or society).

The notion of conflict is an important factor in the consideration of information needs. In an economic sense, information can be viewed as a commodity--a commodity subject to constraints of supply and demand. Seldom will the supply equal the demand. The needs of some will be met at the expense of the needs of others. How needs are to be identified and given priority becomes crucial if the goal is information equity. These and other needs issues will be discussed further in Part III--Formulation and Implementation of Information Equity Policies and Programs.

Related Information Concepts

Also central to information equity are the notions of production, dissemination, and utilization. Given identifiable users and needs, does the information exist, is it available, and is it being used? These concepts do not present the same conceptual complexities as do needs and users. There are more easily identifiable, generally agreed upon definitional parameters. Nevertheless, it is important to be clear about their meaning so as to avoid misunderstanding and inconsistency, especially given that the practical considerations implied by these notions are immense and extremely complex.

The notion of the production of knowledge is fairly straightforward; it involves the discovery and generation of knowledge. In examining knowledge production, considerations include: structure, processes, organization, type, quantity, quality, and origin (Hood, 1979, p. 4).

The notion of dissemination is somewhat more complicated. In its study of educational dissemination, the Dissemination Analysis Group (DAG, 1976) identified four ("hierarchically related") categories of dissemination activities, each category being based on intent and purpose of the activity. These categories were used to provide a four level definition of dissemination.

Level 1.: Spread: The one-way casting out of knowledge in all its forms: information, products, ideas and materials, "as though sowing seeds."

Examples: Radio and television broadcasts, general mailings (without follow-up or feedback), news releases, speeches, official publications (e.g., the Federal Register; Commerce Business Daily), journal and magazine articles, books, news letters.

Level 2.: Exchange: The two-way or multi-way flow of information, products, ideas and materials as to needs, problems, and potential solutions.

Examples: Need-arousing, need-sensing, and "feedforward" (user influence) activities; feedback activities as user surveys, user panels, and site visits; and sharing activities, such as conferences among peers.

Level 3.: Choice: The facilitation of rational consideration and selection among those ideas, materials, outcomes of research and development, effective educational practices and other knowledge that can be used for the improvement of education.

Examples: Incentives for LEAs to engage in search behavior before making decisions; training in decision-making; visits by decision-making practitioners to a variety of demonstration sites; searches of resource bases, and comparisons of the array of relevant programs, products, or knowledge so generated; catalogs comparing alternatives; traveling exhibits.

Level 4.: Implementation: The facilitation of adoption, installation and the ongoing utlization of improvements.

Examples: Consultations, on-user-site technical assistance, locally tailored training programs in required new behaviors; laboratory settings for the practice of new behaviors (pp. 3-4).

The progression from Level 1 to Level 4 corresponds to a progressive merging of the concepts of dissemination and utilization. By Level 4, utilization--employment, consumption, application--of information is very much apparent. Indicators of utilization include usage rates, adoptions, impact, benefits, and so forth (Hood, 1979, p. 4).

The combination of dissemination and utilization, and at times, also production, can be labeled and defined in a variety of (similar) ways. Hood (1979) refers to knowledge production and utilization (KPU) as the field of study

> concerned with an examination of the processes of knowledge production, dissemination, and utilization, and the factors that account for the character and timing of those processes, and with developing strategies and tactics that foster appropriate, timely, and effective utilization (p. 8).

Paisley and Butler (1977) refer to a similar notion as information work, defining it "as the production, distribution, transformation, storage, retrieval, and use of information" (p. 21). And Klees (1974) refers to an education information system as "an entire process or set of processes through which educational data is collected, manipulated, disseminated, and revised according to need" (p. 18).

Information Equity Interpretations

Once information related concepts have been clarified, it is possible to determine a range of possible interpretations of information equity. This results from a synthesis of the analyses found in Parts I and II. These interpretations reflect the three basic positions common to both equality and equity--opportunity/access, treatment/input, results/output--within the context (focus area) of (educational) information.

As Part I has indicated, although equality and equity are often used interchangeably, there is a slight difference in their respective connotations.

Equality implies sameness while equity implies fairness. In actuality, however, as Part I has also indicated, the range of possible positions (interpretations), when fully clarified and developed, is very similar. Either concept can accommodate the other's positions, given adequate qualification, stipulative definitions, and so forth.

In selecting the concept of equity rather than equality, there is a partial break with the current literature. As has been pointed out, equality tends to be the more predominant concept in educational literature, with the exception of school finance literature. Equity is more often considered an economic term. Information equity, here and throughout the paper, refers only to equity with respect to information in the field of education. Common usage would therefore suggest the use of equality.

This can be interpreted as a positive break, however. Much of the educational literature involves complex arguments against providing the same treatment or opportunity to everyone, justifying difference on the basis of need. For example, the argument is made that some individuals require compensation before they can take advantage of the same opportunities or benefit from the same treatments. This line of argument is, in a sense, one based on what is fair. Equity implies fairness. Thus, while differential treatment, routes of access, etc. must still be justified, the focus is initially on fairness and how this relates to sameness rather than on sameness and how this relates to fairness. Logically, this may result in the same relationship--but the initial orientation differs and the manner of viewing and approaching the issue can, in fact, reflect this difference. The use of "equity" in information equity will, therefore, be retained.

Neither the equality nor the equity interpretations, taken alone, are completely satisfactory, however, when applied to the context of information.

The economic orientation of certain equity interpretations, for example, is not altogether appropriate or applicable to discussions of equity with respect to information. The notions of input and output can be somewhat misleading within the context of information, treatment and results connoting more clearly the intent. Therefore, while the concept of equity has been selected over equality, a merging of positions and terminology is considered advisable. The broad interpretations will therefore use some terminology from both equity and equality interpretations and will include information equity as access, treatment, and results.

These interpretations, as explained in the following pages, are theoretical--abstract in nature. They are thus outlined and explained only in general terms; specific details and practical considerations remain the subject of Part III.

Information Equity as Access. This interpretation of information equity focuses on the provision of routes of access or opportunities with respect to information.

If the formalist position (pp. 13-14) is assumed, the emphasis is on providing the same access (opportunities), regardless of an individual's ability to take advantage of this access. The latter is a matter of individual capability, initiative, and responsibility. Differences in routes of access are justified primarily on the basis of merit, and characteristics considered relevant fall within narrowly stipulated parameters. Formalists would therefore tend to disregard the focus group/special needs category of users. That an individual is a member of a minority group, for example, will seldom be considered "relevant" in providing access to a benefit and/or treatment. Consideration of information needs will also be limited, the tendency being to emphasize societal needs and needs stipulated by "experts."

If one of the actualist positions (pp. 14-15) is assumed, elimination of and/or compensation for barriers, restrictions, past inequalities, and so forth which hinder taking advantage of routes of access are given more consideration. The focus group/special needs category of users thus warrants special attention, as does identification of needs. Differences in routes of access are justified on the basis of need as well as merit. The conceptual distinctions required in either position i.e., clarification of needs, merit, relevant characteristics, fairness, etc., are the same as those discussed in Part I and will therefore not be discussed again here.

Regardless of the position taken--formalism or actualism--information equity as access interpretations tend to focus on access to particular kinds of information. This information tends to be defined in terms of what is considered by "experts" to be important, relevant, and useful. While an attempt is made to determine what information is needed with respect to different categories of users, the emphasis is on identifying the needs of "others" rather than involving "others," except superficially, in the needs identification process. That the information provided may not be appropriate is not often a serious consideration.

The tendency in information access interpretations is to disregard the training that may be required to enable an individual to understand and use the available information. Although an actualist interpretation can take this somewhat into account, the emphasis on access directs attention away from treatment and utilization. The focus is primarily on a limited notion of dissemination, similar to the DAG (1976) report Level 1: Spread.

Examples of policies and programs representative of information equity as access interpretations will be examined in Part III.

Information Equity as Treatment. The emphasis of these interpretations is on treatment or input, reflecting the notions of horizontal and vertical equity i.e., equal treatment of people in equal positions and unequal treatment of people in unequal positions. As has already been discussed, when presented in this version, the position is fairly meaningless and definitely lacking in definitive quidelines.

In addition to those conceptual considerations discussed in Part I in connection with this view, the context of information introduces other considerations as well. Given that treatment can refer to actions, practices, modes, distributions, rules, and regulations, the notion of treatment within the context of information is subject to a variety of interpretations. It could, for example, be interpreted to refer to any of the following:

1. Provision/dissemination of available information
2. Provision of necessary training required to understand and use information
3. Consideration of information needs
4. Application and enforcement of rules and regulations governing information dissemination and utilization
5. Development of "appropriate" information

Numerous other "meanings" can be added, each of which will alter the overall meaning of information equity.

In any of these interpretations, however, utilization of information is not an issue. It is treatment (input), whether in terms of information dissemination, training in the retrieval and use of information, or whatever, that provides the parameters for what will be considered in formulating information policies and programs. Given the terminology and orientation of information policies and programs, the tendency of information equity treatment interpretations will be to focus on dissemination, although the selection of "level" of dissemination will vary, as will the emphasis given to needs, merit, relevant characteristics, categories of users, and so forth. A variety of possible policies and programs representative of treatment interpretations will be examined in Part III.

Information Equity as Results. The emphasis of these interpretations is on outcomes (output). This can mean same results, minimal achievement, same progress, proportionate results, or equivalent results (pp. 23-24). In all these interpretations the focus tends to be on the identification of results with information utilization and/or the ability to understand and use available information.

The emphasis on results reflects at least to some degree the Coleman view that part of the implicit meaning of equality (here equity) is the notion of effectiveness. That is, it is not sufficient to equalize (make equitable) information access and treatment since these can (and will) allow inequities with respect to information. It is only when the effectiveness of access and treatment (in terms of impact, achievement, results) are made equitable that "real" information equity can exist.

Because of the inclusion of utilization concerns, results positions can be more comprehensive than treatment or access positions, depending, of course, on the manner in which specifics of the positions are "filled in." That is, in order to achieve equitable results (in the context of information), policies and programs normally will find it necessary to focus on access and treatment as well as results. Examples of these positions will be discussed in Part III.

PART III

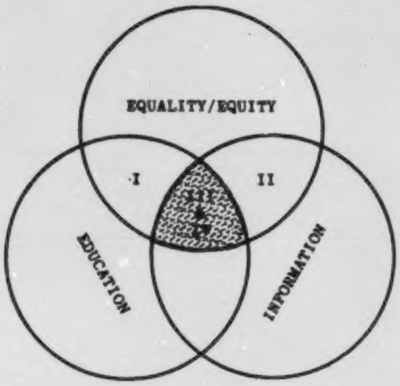
FORMULATION AND IMPLEMENTATION OF INFORMATION EQUITY POLICIES AND PROGRAMS: ISSUES TO CONSIDER

Introduction

The notions of equality and equity tend to reflect an ideal in which people purport to believe. To support an ideal is, in some sense, an easy matter--if the commitment required is only verbal. To support an ideal in practice is more difficult. There is always difficulty in translating theory into practice. Theoretical clarification and considerations are an important first step in formulating policies and programs. The important point to remember, however, is that the development of policies and programs is a process, a process involving both theoretical and practical considerations. Without conceptual clarification, policies and programs will not be coherent and consistent. But without adequate examination of practical problems of formulation and implementation; economic, social, and political constraints and consequences; and so forth, the theory underlying these policies and programs will have little to do with the reality it is supposed to reflect and the policies and programs will be of minimal use when and if they become workable.

The purpose of Part III is to illustrate possible programs and policies representative of different information equity interpretations and to examine the actual and potential problems and questions surrounding them. While the primary focus of Parts I and II has been on conceptual distinctions and issues, Part III enumerates and explains the more practically oriented issues and indicates the connection between conceptual and practical considerations.

With respect to the diagram on page 2, the focus is on the intersect among equality/equity concepts, information, and education i.e.,



Each of the basic information equity interpretations--access, treatment, results--will be considered separately. The broad interpretation will be reiterated, followed by examples illustrating possible variations of the interpretation and a discussion of problems, limitations, issues, and consequences which must be considered.

Information Equity as Access

The central focus of access interpretations is the provision of routes of access or opportunities to obtain x (a benefit or treatment). Placing equity within the context of information does little to limit what can be considered access or what can be included as x, given the extensive parameters of information (even when limited to educational information). In general, and perhaps superficially, information equity as access means just what it suggests--equitable access to information. Both in theory and in practice, however, various meanings can be assigned to "equitable access to information." The distinctions between formalism and actualism as discussed in Parts I and II illustrate the diversity of possible positions.

Formalism. The Educational Resources Information Center (ERIC) can be interpreted as representing a formalist position. The ERIC system, composed of 16 decentralized clearinghouses and 4 centralized processing, management centers, provides access to the approximately 300,000 documents and journal articles found in its database. This information is accessible in printed form through the ERIC system or through any of the 630 microfiche collections located throughout the United States at universities, education agencies, and research and development facilities. Theoretically, anyone interested in obtaining educational information through ERIC can do so. No one is barred from using the system and there is no discrimination or selection among requests for information. Everyone has equal access to the available information.

This represents a formalist interpretation of information equity. The emphasis is on sameness i.e., equity is interpeted as equivalent to "equality as sameness"; access to ERIC should be the same for everyone. Whether an individual has the necessary background, ability, etc. to take advantage of ERIC is not an issue. This is not a responsibility of the program; the individual chooses whether or not to avail him/herself of the information in the database.

ERIC has been cited here only as an illustration of a formalist position in order to provide a concrete example from which to begin discussion. The intent, however, is to provide guidelines to be used in developing any formalist program, not to analyze or criticize any one particular program.*

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* Those who are highly familiar with ERIC will recognize that at least some aspects of ERIC, e.g., clearinghouse choices of content, style, and targeted distribution of various ERIC information analysis products to meet the needs of special groups, go beyond the formalist position depicted here.

Henceforth, then, the discussion will be slightly more general, thus allowing more diversified applicability.

Policies and programs reflecting a formalist interpretation of information equity are potentially the easiest to formulate and implement. They are also potentially the least effective and most open to criticism by those who contend that they have not been treated fairly (or justly). This results primarily from the emphases of formalism:

1. Sameness (equitable access means same access)
2. Individual responsibility
3. Merit (rather than need)
4. Relevant characteristics (for differential routes of access) narrowly defined

What this means is that formalist policies and programs actually focus on development of databases and dissemination of information upon request. Access to these databases is, in theory, the same for everyone. While equity implies fairness, formalists can interpret "fair" as simply meaning "same" under normal conditions. If differences in routes of access are requested (on the basis of fairness, for example), only characteristics related directly to the immediate treatment/benefit are considered relevant. A formalist, then, could deny the necessity of considering background, socioeconomic status, location, race, etc. in developing policies. These are not relevant in making information accessible. It is the individual's responsibility to take advantage of what is available. Merit takes precedence over need.

Questions of formulation and implementation are not as complex as are those associated with some other information equity positions. One of the primary issues to be addressed is the constitution of information. This must be considered regardless of the interpretation given to information equity (although the interpretation will determine in part the response) and involves a number of complex questions, many of which overlap with other equally important issues. For example:

1. What is meant by "information"?
2. What is the context i.e., what are the parameters for more narrowly defining "information"?
3. What information is to be made accessible?
4. Who determines which information is to be made accessible and upon what basis?
5. To whom is this information to be made available?
6. To what extent is information tailored to the needs and/or abilities of the users?

Obviously the definition of "information" as processed data which alters the cognitive structure of the user is extremely limited in providing any means by which to select "data" to be made accessible. It includes almost anything. To restrict this to educational information provides some contextual limitation. This is not sufficient, however. Almost anything can constitute educational information. Even given a limited definition of education, the category is still too encompassing. At some point, what is to constitute educational information (with respect to a particular program or policy) must be stipulated. Before policies can be formulated to provide something equitably, it must be clearly determined (stated) what it is that is to be provided (made accessible). That is, it must be made clear that educational information includes x,y,z, but not a,b,c.

Who determines which information is to be made accessible and upon what basis this determination is justified can be a matter of controversy. At least part of this determination (and justification) is a matter of values.

Decisions concerning priorities--what and what not to make accessible--reflect what is considered valuable. Opinions can and do differ. With respect to educational information, the norm is to include information judged by "experts" to be useful and appropriate. (This information is usually also "produced" by these same "experts.") This is particularly true in formalist positions, given the lack of attention paid to needs.

Questions involving the determination of the constitution of information overlap with two other important considerations, the function of needs and the role of users. One obvious issue involves to whom the information is to be made available. Who are the users? The response to this will have some influence on what information is to be made accessible. How much impact, however, will vary according to the emphasis placed on user needs. If meeting the information needs of users is not considered a high priority, considerations concerning needs and users become less significant. Since formalist positions deemphasize needs and narrowly define relevant characteristics when justifying different routes of access, user and needs issues are not as complex as in some other interpretations. Certain basic questions must be addressed, however, even if the response given indicates that the issue does not reflect an important consideration. These include:

1. To whom is the policy or program targeted i.e., who is the audience or to whom is the information to be made accessible?
2. Is the focus on individual users or blocs (categories) of users, e.g., racial categories, ethnic categories?
3. What "categories" of users are being targeted?
4. How are users (or categories of users) identified?
5. How important are users in developing information equity policies and programs i.e., what role do they play or what impact do they have?

6. What is the function of needs i.e., to what extent do information equity programs and policies reflect the needs of users?

7. How are needs identified?

8. Whose needs are being considered?

9. How are needs evaluated?

10. What "types" of needs are being considered, e.g., long-range, short-range, potential, actual?

11. Whose (and what) needs are given priority?

Formalist positions circumvent some of the more difficult problems in effect by not considering them. Need is not an important consideration, except in a very general, abstract sense. It therefore requires less attention than in the actualist positions, for example. (Additional needs will be discussed in the Actualism section.)

Whether formalist or actualist, particular attention must be paid to the notion of access since it provides the focal point of policies and programs.

1. How is "access" to be defined?

2. How is "access" to be operationalized?

3. On what basis is access determined to be equitable?

4. What measures are to be taken to ensure that access is equitable?

5. Is access to be provided equally (same) or differentially? What is the justification for differential treatment?

6. Whose responsibility is it to see that users are aware of available information i.e, does access mean informing potential users of the availability of information or providing information only upon request?

Related to these questions are a variety of other issues, ranging from those focusing on goals to others more pragmatically oriented toward cost-benefit analysis.

1. What are the specific goals of the program?
2. Who determines these goals and upon what basis?
3. Are these goals realistic (or utopian) in the short term? Long term?
4. How are goals to be met?
5. What are the foreseeable consequences (potential and actual) with respect to recipients (participants) and non-recipients (non-participants)?
6. Who benefits and who does not i.e., who are the "winners" and the "losers"?
7. Does the information being provided have equal or similar value for all users (or categories of users)?
8. What goods, e.g., types of information, and services are being made accessible and to whom?
9. Given finite resources, from whom are these goods and services being taken in order to redistribute them?
10. Is there a demand for the types of information and services being made accessible? Can this demand be met? Can or should this demand be created if it does not already exist?
11. What are the predicted costs in terms of time, money, staff, resources, etc?
12. Are the costs worth the benefits?
13. Is there general support for the intent of the program?
14. Are those who will bear the cost of the program willing to do so?
15. What methods of evaluation are to be used in assessing the success or failure of the program?
16. What criteria of success and failure are being used?
17. On what basis will programs (policies) be continued/discontinued?
18. What political dynamics must be considered in formulating and implementing the program (policy)?
19. Which interest groups represent the biggest threat and why? Which are the most supportive and why?
20. Can the interests of "competing" groups be balanced? Is this desirable?
21. What is the balance between social and individual responsibility?

Questions of this type are not unique to formalism; *they must be addressed by any information equity position*. The position taken will, of course, effect the responses given. This is not a one-way interaction, however. Ideally it may be reassuring to believe that it is the underlying ideal that provides direction to the formulation and implementation of policies and programs. While this is true at times, it is also true that pragmatic considerations can begin to alter the original "ideal"--or can, in fact, form the basis of a position when no definitive one was priorly assumed. For example, a program may begin by representing an actualist position, emphasizing provision of access and elimination of and/or compensation for barriers which hinder taking advantage of routes of access. High costs, claims of reverse discrimination, powerful lobbying groups, etc. may result in the program adopting the more "conservative" formalist position, thus eliminating the compensation and needs components.

In addition to these issues, formalists must consider the major objections that can be raised against their particular interpretation of information equity.

1. Formalist positions focus on providing access to information. Whether or not an individual can take advantage of these routes of access is seldom an issue. That is a matter of individual responsibility. Realistically, not all individuals are able to take advantage of the available opportunities to obtain information. Taking ERIC as an example:
    a. Some individuals do not live in an area where ERIC is readily available.
    b. Other individuals may not be able to afford the cost attached to ERIC retrieval.
    c. Others may not possess the technical skills and abilities to use the ERIC system.
    d. Individuals with physical handicaps may find it impossible to use the system.
    e. Non-English speakers will also find it impossible to use the system.
    f. Some individuals may not understand the information which is made accessible.

g. Others may not understand the purpose for obtaining any of the information found in ERIC.
h. Still others may not even know of the existence of ERIC.

There are a variety of reasons why an individual does not or cannot take advantage of the routes of access provided. Formalist positions tend to disregard individual differences and needs in providing access. That people are not equal (same) in their ability to take advantage of the routes of access provided is taken as a fact of life. It does not require compensation. Equity as fairness here means people are given the same chance--in this limited sense. They do with it what they will--if they can.

2. Whether the question of information intelligibility and applicability must be addressed depends on the definition of access. Formalist positions tend to disregard these questions, both because of their devaluing of individual needs and their emphasis on individual responsibility.

3. Formalist positions are also more likely to disregard identification of users. Although information is, of course, geared to particular target groups, e.g., people in education, the pressure to identify users is not as great as with actualism, for example, since the routes of access provided tend to be the same for everyone.

4. An emphasis on access requires no examination of results (outcomes). How information is used--or whether it is used--is not an issue. Accounting for information utilization is not a necessary part of programs concerned with information equity interpreted as access.

5. The notion of providing equal or equitable access to something (here information) is considered a conservative approach to equality/equity issues, formalism being more conservative than actualism. Different backgrounds, abilities, socioeconomic status, etc. can be, and often are, disregarded by formalists as being irrelevant to formulating and implementing equity policies and programs. Any position that emphasises only access will have a tendency to either stabilize or increase existing differences, that is, inequities. This is because access only means having a chance or opportunity to do or receive something. Being able to maximize that chance is affected by a variety of factors, e.g., background, ability, socioeconomic status, etc. Those who have suffered inequities (in terms of access and/or treatment) in the past are those same individuals who will be less likely to maximize their chances in the present. Thus inequities will increase, not decrease, in the future. In terms of information, those individuals who have not had access to information in the past--the "information poor" as Childers and Post (1975) refer to them--will be less likely to avail themselves of current programs aimed at achieving information equity. Thus in the future they will have even less information (comparatively) and be less capable of using information systems that become increasingly larger and more complex than will others who were able for whatever reason to maximize their opportunities.

Actualism. Actualism emphasizes both the provision of equal access (to some benefit and/or treatment) and the elimination of and/or compensation for barriers, restrictions, past inequities, etc. which hinder taking advantage of routes of access. Unlike formalism, actualist positions reflect a concern for individual differences and needs and a recognition that these may affect an individual's ability to take advantage of the routes of access (opportunities) that are provided. Actualist programs and policies are oriented toward compensatory activities, the view being that without the provision of prior, additional, appropriate, often compensatory routes of access (or treatment), not everyone will be equally able to avail themselves of the present opportunities which are being provided. The emphasis is on both sameness and fairness, the balance tipping slightly toward fairness, the notion being that fairness requires differential access on the basis of need.

Information equity policies and programs reflecting a compensatory actualist position will focus on compensation through the provision of alternative routes of access, based on individual needs. Common goals are established and alternative means of obtaining them are provided. If, for example, ERIC were designed such that those individuals incapable of using the system were provided alternative routes of access so that they could take advantage of the program, this would illustrate compensatory actualism. That is, if a person does not have the necessary skills and abilities to use ERIC, then these must be provided in order to ensure equitable access to ERIC.

Compensatory actualism assumes that everyone shares the same goals. Alternative actualism focuses on equivalent goals, recognizing that not everyone will have, or realistically can have, the same goals. Programs and policies reflecting an alternative actualist orientation will provide alternative routes of access to alternative, equivalent ends. Differences in both means and ends are based on the needs of the individual.

Policies and programs reflecting an actualist interpretation are somewhat more complicated than formalist programs and policies. In addition to having to address the previously discussed questions concerning information, needs, users, access, goals, feasibility, and so forth, the notion of compensation introduces a whole new array of issues, many of which overlap into the aforementioned "categories" of questions. These include:

1. How is "compensation" to be defined?
2. How is "compensation" operationalized?
3. For what are individuals being compensated?
4. How are users in need of compensation identified?
5. How much compensation is to be provided?
6. To what "level" are users to be brought before compensation is discontinued?
7. What are the boundaries of compensation?
8. What ethical constraints are placed on compensation, particularly when compensation is viewed as intervention, e.g., to what extent can the state intervene in family life in the name of compensation?
9. What financial and other resource constraints must be considered?
10. How reasonable is it to assume that compensation will be sufficient to provide equitable access?
11. How are differences in routes of access, in the form of compensation, justified?
12. Are the costs worth the benefits?
13. How are priorities established with respect to who will be compensated and how much?
14. How can any one program compensate for the full range of societal inequities an individual may experience?

The list is almost endless and, as it implies, involves numerous complex issues.

While questions involving users and needs were simplified by formalists, primarily due to their lack of emphasis on both needs and users, they are complicated by actualists. Differences in routes of access (and goals for alternative actualism) are justified on the basis that individual needs and differences affect a person's ability to take advantage of an opportunity. Part of providing equitable (or equal) access is the elimination of and/or compensation for barriers, restrictions, etc. that hinder taking advantage of routes of access. This means that needs and users become important--and complicated--categories for actualists. While formalists could dismiss identification of needs and more or less ignore users, actualists must deal in detail with the difficulty of defining and operationalizing the notion of needs; identifying needs, users, barriers, restrictions, etc.; assigning priority to competing needs; and so forth.

Pragmatic considerations, particularly questions of feasibility and cost-benefit, also become more complicated. Actualist policies and programs can be more expensive than formalist positions, given that the goals are more extensive and the program is more tailored to individual needs. The expense, coupled with the fact that the focus is on providing different routes of access--meaning some people benefit more than others--suggests fertile ground for competing demands, claims of reverse discrimination and injustice, and so forth.

In addition to these issues, proponents of an actualist interpretation of information equity must consider the major objections which have been raised against it. While the criticism against formalism focused on what formalist postions fail to do, actualism is open to attack by formalists (and others) for "going too far" and by other interpretations as "not going far enough."

1. Criticisms of actualism as too extensive often tend to focus on the balance between societal and individual responsibility or what factors should count as facilitators and deterrents to equity. Formalists emphasize individual responsibility; the individual is to make it on his/her own. It is society's responsibility to ensure that routes of access are equitably made available and it is the individual's responsibility to take (or not take) advantage of these routes. Actualists, on the other hand, emphasize the difficulty some individuals face in making it on their own, given the barriers, restrictions, etc. that they have and do experience. It is society's responsibility to eliminate and/or compensate for these barriers, etc. in order to ensure that all individuals are equal (same) in their ability to take advantage of the available routes of access. It is then the individual's responsibility to take (or not take) advantage of these routes. In actualist positions, more responsibility is placed on society to be held accountable for past and present inequities which affect access. In formalist positions, more responsibility is placed on individuals to overcome past and present inequities which (might) affect access.

2. The second issue over which formalists and actualists disagree is what factors are to count as facilitators and deterrents to equitable access. (There are, of course, other issues over which they also disagree.) Formalists tend to make a very definite distinction between environmental (external) and personal (internal) factors, discounting all personal factors as not an appropriate focus in providing access equitably. Personal factors include such things as motivation, ideas, beliefs, abilities, traits, and so forth. Actualists also distinguish between personal and environmental factors, but do so less stringently. They are more likely to maintain that many so-called personal factors are, in fact, a result of or interrelated with environmental factors. For example, a formalist could claim that an individual did not take advantage of ERIC because of lack of personal motivation, thus disclaiming any responsibility for an apparent inequity. The formalists would claim, in fact, that routes of access were equitable. The actualist would claim, at the very least, that this is a simplistic approach. Motivation can be a product of the school attended, the community environment, family background, socialization, and/or any number of environmental factors. Equitable access is not guaranteed unless these factors are compensated for to ensure that the individual is able to take advantage of the available routes of access.

3. An additional criticism of actualist interpretations, from the perspective of those who contend actualism "goes too far," is that it results in reverse discrimination. Although this involves a variety of complex arguments and disagreements, one of the major

sources of controversy stems from the emphasis placed on either merit or need. Actualists argue from the position of need i.e., special (different) routes of access are provided on the basis of need. Formalists argue from the position of merit i.e., people get what they earn or deserve. The argument is made that granting "special privilege" to individuals on the basis of need discriminates against those who are "deserving" on the basis of merit. Given limited resources, compensation for some means less for others. (Of course, the same line of argument can be made against formalism, arguing that people with special needs are discriminated against in favor of those judged by some arbitrary standard to be meritorious. What is to constitute "merit" is a matter of values. To merit something in one society is not to merit it in another.)

4. Actualism is also open to criticism from the perspective that it does not go far enough in addressing equity issues. As was the case with formalism, actualism is concerned with access not results. How information is used--or whether it is used--is not an issue.

5. Also similar to formalism, actualist policies and programs will not close the gap between the information rich and the information poor. Since more concern is paid to compensation for and/or elimination of barriers, etc. to information access by actualists than formalists, the gap may be somewhat more stabilized by actualist programs. But given that compensation is of limited effectiveness and that individuals differ in their ability to find, understand, and use information as well as any number of other factors, equitable access will not be sufficient to close the gap between the information rich and poor.

Information Equity as Treatment

The primary intent of treatment interpretations is normally expressed as "like cases are to be treated as like, and unlike cases as unlike." This is a fairly vacuous principle, even when placed in the context of information. Without further specification, information equity as treatment could be interpreted to mean almost anything.

As was discussed on pages 16-20, treatment and input can be used to indicate a vast array of activities, practices, distributions, rules, and so forth. Programs and policies based on a treatment interpretation of information equity can therefore assume a wide range of approaches, focus on very different goals, and provide a variety of goods and services. Consider, for example, the following possible meanings that could be assigned to information equity as treatment:

- Everyone must be provided the same information.
- Everyone who requests information should be provided the information they request.
- Everyone should be provided the same quality of information.
- Everyone should be provided certain (basic) information regardless of whether it is requested.
- Everyone who requests information should be provided information according to their needs.
- Everyone should be provided information according to their ability to use it.
- Everyone should be provided information according to their needs, regardless of whether they have requested such information.
- Everyone should be provided information according to their effort to obtain it.
- Everyone should be treated as equals (the same) in their requests for information.
- Everyone should be treated equally (or equitably) as potential information consumers.
- Information production should reflect equal (same) concern for the needs of all information users (potential and actual).
- Rules and regulations governing information production, dissemination, and utilization should be applied and enforced equitably.
- Those constituting the "information poor" should be given compensatory treatment in the form of training, provision of supplementary information, and so forth, in order to lessen the gap between them and the "information rich."
- Everyone who requests it is to receive appropriate training in accessing and utilizing information systems.
- Everyone is to receive appropriate training in accessing and utilizing information system, regardless of whether they have requested such training.

These represent only a sample of the possible meanings of information equity as treatment. And each of these meanings involves its own set of questions that must be addressed, some but by no means all of which overlap with questions pertaining to other "meanings." Obviously it would not be possible within the context of this paper to enumerate the sets of questions for all these positions. An exemplary set will, however, be suggested, as will questions that must be considered by all treatment positions.

Obviously, questions directed at the constitution of information must be addressed by proponents of any of these positions. These questions are very similar to those discussed in connection with information equity as access. For example,

1. What is meant by "information" i.e., how is it defined?
2. What is the context i.e., what are the parameters which will allow information to be more narrowly defined?
3. Given responses to questions 1 and 2, specifically what information is being discussed i.e., what information is to be provided, regulated, etc.?

Also similar to the discussion of information equity as access are questions focusing on needs and users. Questions pertaining to users are particulary important to treatment interpretations, potentially more so than in access interpretations. Treatment implies that someone will be the beneficiary or recipient of something--a treatment; access does not necessitate this same connection. Thus identification of users can be central to policies and programs reflecting a treatment interpretation. Many of the above positions suggest that everyone be provided with information or training or be treated as equals. This "everyone" presents obvious difficulties, suggesting the general direction of user oriented questions that must be addressed. For example:

1. How is "everyone" to be defined? Who does it include: everyone in the world, society, community, ethnic group, age group, specific information user category (people in the field of education, for instance), special needs groups, etc? Another way of addressing this question is to ask to whom the policy or program is directed i.e., who is the audience? This will indicate how the notion of everyone is to be limited.

2. Is the focus on individual users or on categories of users?

3. What categories of users are being targeted?

4. Given the limited notion of "everyone" established in questions 1 through 3, who is not being considered and why? For example, some positions stipulate that only those individuals who request information (or training) will be provided it. This is one limitation on who constitutes "everyone."

5. Having established these limitations, will people (or groups) who have not been targeted as beneficiaries of these programs and/or policies be allowed to participate if a request is made to do so? Will they be encouraged to do so? For example, if a particular program is designed to provide training in information search and retrieval techniques for elementary and secondary teachers only, will individuals who are not teachers but express an interest in acquiring these skills also be allowed to participate? Will their participation affect the nature or availability of the treatment for those for whom it was originally designed?

6. How are users (participants) identified?

7. What provisions have been made to ensure that targeted audiences will, in fact, be reached?

Questions focusing on needs vary more with the particular interpretation assigned to information equity as treatment than do user oriented questions. Some positions give special attention to user needs, e.g., everyone should be provided information according to their needs; information production should reflect equal concern for the needs of all information users. Others indicate that everyone will be treated equally, meaning the same, thus suggesting less attention to individual differences and needs, e.g., everyone should be treated as equals in their requests for information. The need oriented questions suggested in connection with actualism and formalism resemble those that must be considered by proponents of treatment interpretations, adapted, of course, to the particular program and/or policy.

Many of the other questions that require attention are also the same or similar to those already mentioned. Programs considering compensation or differential treatment must consider types of questions resembling those discussed in connection with actualism. Feasibility and cost-benefit issues remain essentially the same although certain obvious revisions will naturally be required, given the treatment rather than access orientation.

As has already been stated, in addition to these types of questions, each treatment interpretation involves its own set of questions, some of which are not applicable to other interpretations and many of which are. Consider, for example, the position that everyone should be provided certain basic information, regardless of whether they request it. This interpretation of information equity as treatment reflects the view that certain information is essential for survival, well-being, success, or for some other end. Policies and programs representative of this position can take various forms and involve a variety of questions. A sample of issues to consider includes:

1. Presumably this position reflects what is considered to be equitable. How is "equitable" defined i.e., does it mean "same" or "fair" or both?
2. If "equitable" is interpreted as implying "fairness," how is "fairness" defined?
3. In indicating that everyone is to receive certain information, how is "everyone" defined? Does it mean everyone in the world; in a society; in a specified age group; in a category of users, e.g., since information is being limited to educational information, people in the educational arena; in a special needs/focus group category?
4. If "everyone" actually only means certain people or groups, how is the exclusion of others justified?

5. How is "information" defined? How is "basic information" defined and what does it include?

6. What specific information is to be provided?

7. Is this information to be adapted to individual users such that everyone who receives it is also able to understand and/or use it?

8. How intelligible must this information be to users?

9. What is the function of individual needs in selecting information to be provided?

10. What is the function of individual needs in designing the program responsible for providing this information?

11. Why is this information considered essential? To what is it essential?

12. Determining that something is essential reflects, at least in part, certain values. Whose values are being represented and whose are not? For example, Planned Parenthood considers it essential that all females (and hopefully males) be provided information concerning contraception and birth control. This reflects certain societal and/or personal values. The Catholic church may disagree with these values, as might right-to-life groups.

13. What justification can be given for providing people with information that they have not requested?

14. Can provision of information be justified even if individuals express a desire not to receive it? For example, can the teaching of evolutionary theory be justified even if a community (or parent) does not want it taught? To what extent can justifications of this type be taken, e.g., if information can be provided about evolution, can it also be provided about building nuclear weapons? If not, why?

15. Is it practical to provide everyone with certain information?

16. What are the costs of such a program? Are they worth the benefits?

17. What provisions have been made to ensure that everyone will receive the designated information?

18. What provisions have been made to ensure that everyone will understand the designated information?

There are, of course, numerous other questions that can and should be considered. But even this small sample illustrates the complexity of this particular treatment interpretation--and it is by no means the most complicated of possible positions.

In this particular position and, for that matter, in all information equity positions, it is important to be very clear about goals and to distinguish between principles in the ideal and in practice. While socially, politically, and morally the idea of providing everyone with certain essential information may be extremely desirable, it is subject to numerous constraints and limitations. People differ in their opinions about what is essential. It is impossible to ensure that everyone is provided this information. Some people will not be able to understand the information provided, perhaps because of language barriers, literacy limitations, inadequate academic preparation, differing world views, and so forth. Programs with an extensive goal of this type, even if only limited information is to be provided, will be expensive; members of society are often reluctant to provide the necessary funds.

For these and other reasons, programs and policies representative of this particular treatment interpretation of information equity are subject to definite limitations, as are any equity/equality policies and programs, whether they are within the context of information, education, economics, politics, or whatever. The policies and programs implemented seldom allow an adequate translation of the ideal principle into practice. While people support variations of equity/equality principles in theory, they seldom are willing to take the necessary steps and undergo the resulting consequences which would enable them to become actualized. This criticism is not unique to treatment interpretations of information equity. There are, however, certain criticisms directed at treatment positions that must be considered.

As was the case with actualism, policies and programs based on treatment interpretations of information equity can be criticized from both sides i.e., they go "too far" or they do not go "far enough." Since the range of possible interpretations of information equity as treatment is so extensive and diverse, it is difficult to cover the variety of types of objections that could be raised. The following are not meant to be inclusive of all cricitisms but rather to illustrate a few of the more common objections.

1. Many treatment interpretations emphasize equitable treatment which often means equal (same) treatment to equals and differential treatment on the basis of need. Critics argue this provides no real incentive for people to excel. Need is rewarded; success (merit) is not. Why should individuals put forth their best effort if they are not rewarded for it? Objections of this type tend to arise in the economic sphere over questions of distribution. Information policies and programs can, however, be subjected to the same criticism.

2. One of the central issues underlying the above objection is the relevance and priority attached to merit and need, an issue already discussed in connection with actualism.

3. Also at issue, and discussed in the actualism section, is the weight assigned to individual and societal responsibility. Critics of treatment interpretations could argue that society is assuming too much responsibility for what happens to the individual. Providing equal or equitable access is more than sufficient. Individuals must assume responsibility for anything beyond access. (Arguments concerning responsibility readily overlap with those concerning need and merit.)

4. Treatment interpretations can be criticized on theoretical grounds as being too vague, lacking clear direction until particularized to a specific program or policy with statable goals. One treatment program can emphasize equitable treatment as that provided on the basis of merit. Another can emphasize needs. Still another can emphasize same treatment, regardless of need or merit. Treatment may mean an identifiable practice, some activities, rules, regulations, distributions. It can mean almost anything--or almost nothing. It can be extremely expansive and extensive or extremely limited.

5. Objections can be raised on pragmatic as well as theoretical grounds. Criticisms of this type focus on expense, too extensive a range (with respect to intent, activities, and audience), and lack of feasibility.

6. As is the case with access interpretations, treatment interpretations tend to neglect information utilization. How information used--or whether it is used--is seldom a concern.

7. While some may argue that treatment interpretations go too far in trying to achieve the goal of equity, others argue that it fails miserably in its efforts to achieve this goal. Policies and programs representing a treatment orientation do not necessitate the closing of the gap between the information rich and poor. Depending on the program, the gap may even be increased. Programs that emphasize equal distribution of information upon request will result in providing information to those who are already knowledgeable about existing information and information systems. Those who are not knowledgeable will not benefit; or they may not be able to understand the information provided; or it may not be what they need or want. Given different abilities, skills, backgrounds, etc., equal (same) treatment can do little to lessen the gap. Equitable treatment, interpreted as meaning fairness, substantiated on the basis of needs and suggesting differential treatment, will also be limited in its impact on closing this gap. Compensation, as has already been mentioned, is limited in its effectiveness. In addition, the focus of treatment interpretations redirects attention, perhaps unintentionally, away from closing this gap. The focus remains on what is done to someone--treatment. Whether what is done is effective--whether the information or training provided is used--tends to get lost in both the access and treatment orientations.

Information Equity as Results

The focus of interpretations of information equity as results is on outcomes. Within the context of information, this normally means attention to information applicability, intelligibility, and utilization. That is, the effectivensss of information dissemination programs, assessed in terms of whether and how information is used, is considered an important aspect of achieving equity with respect to information. Providing access to information is not sufficient, nor is providing treatment. Both neglect information utilization and both can result in a broadening of the gap between the information rich and poor. To ensure that equity is achieved and this gap is eliminated--or at least narrowed--proponents of results interpretations suggest that the focus must be on whether an individual can actually understand and use the information that has been made accessible or provided. If the outcome of information programs and policies, whether access or treatment oriented, is not understanding and utilization, they have failed to provide information equity.

As has already been discussed, there are various ways of interpreting information equity as results: same results, minimal achievement/minimum attainment, same progress, proportionate results, and equivalent results. Although each position emphasizes results in one form or another, policies and programs representative of these interpretations may have substantially different goals and will thus often look quite different from one another. Even so, all these interpretations must address essentially the same questions (with some minor variations, of course), the majority of which are also the same or similar to those previously discussed in connection with access and/or treatment interpretations. Obviously, results interpretations will find it necessary to consider issues concerning information, needs, users, feasibility, and so forth. Since these have already been examined, it is not necessary to reiterate them here. Additional questions will be discussed as the five proposed variations are considered separately.

Same results. Policies and programs representing the same results interpretation have as their overriding goal the achievement of equal (same) outcomes. In education this would mean everyone possesses the same skills, knows the same facts, performs at the same level, and so forth. In the context of information, this can mean everyone possesses the same ability to access, understand, and use information; everyone possesses the same information and is able to use it; everyone's information use is the same; or all three.

The difference in orientation from access and treatment interpretations is apparent. Access interpretations provide the opportunity to obtain information. Treatment interpretations provide information and/or information oriented training. Neither guarantees (or necessarily even considers desirable) that two people taking advantage of the available routes of access and the information and training provided will end up at all equal (same) in their ability to understand and use information and information systems and in their information utilization. The intent of same results is just this.

Since people differ in their information related skills, their ability to understand the information, their need for the information, the value they attach to it, and so forth, judging equity on the basis of same results suggests that programs and policies representative of this view must be concerned with both access and treatment and must emphasize compensation on the basis of individual differences and needs. Both identification of needs and compensation for individual differences are essential if same results are ultimately to be achieved.

In addition to examining the previously discussed questions concerning information, users, needs, etc., results positions introduce an entirely new category--results. Within the context of information this normally means information intelligibility, applicability, and utilization.

1. How are "intelligibility," "applicability," and "utilization" to be defined and operationalized?
2. To whom must information be intelligible?
3. To what must information be applicable?
4. What (and whose) standards of intelligibility and applicability are being applied?
5. How are intelligibility, applicability, and utilization to be determined?
6. On what basis is utilization justified as a determining factor in judging equity within the context of information?

7. How are variations in utilization accounted for?
8. What impact does the value individuals' attach to information have on utlization? What impact does it have on information production?

These are just a few of the questions that must be addressed but they illustrate the complexity of the variable that results interpretations have introduced. The task of simply identifying how (and whether) information is currently used and comparing utilization among categories of information users would be a formidable one. And it would be only one of many tasks required by results interpretations. Same results requires that once deficiencies in utilization (and applicability and intelligibility) have been identified, whatever steps necessary must be taken to see that these differences are eliminated.

While the impracticality of this interpretation is an obvious drawback, the gravest objection is that to achieve same results would require holding back some indivdiuals so that others could catch up. There will always be individuals who have more intelligence, skills, ability, and so forth than others, regardless of similarities (and differences) in socioeconomic status, background, education, etc. In order for everyone to be at the same level in their ability to understand and use available information, not only will some individuals require extensive compensatory treatment, what might be termed positive differential treatment, but others will require negative differential treatment (or no treatment) to ensure that they will not excel beyond what others can achieve.

Minimal Achievement/Minimum Attainment. One way of circumventing some of the ethical and pragmatic difficulties raised by the notion that everyone should achieve the same results is by demanding same results only with respect to minimum attainment. This is an obvious compromise, and as a compromise does less to decrease the gap between the information poor and rich. How much it decreases the gap is contingent on what minimum standard of achievement is established. If the ability to access and use information found in ERIC is the only criterion, little impact will be made on eliminating differences. On the other hand, if minimum achievement means the ability to access, understand, and use the information in a variety of information systems and includes producing information more applicable to the different needs of information users and equalizing actual use of (specified) information, the gap perhaps might be lessened.

One objection to this position, then, is that it does not sufficiently lessen inequities either in information utilization or in the ability to understand and use information. This, as has been stated, depends on the standard of minimum achievement which is established. From the opposite point of view, another objection is that even the attainment of a minimum level of achievement may be impossible for some individuals. To invest time, money, and other resources into programs that aim at having everyone reach a certain specified level of achievement is neither practical nor possible.

Same Progress. Another compromise position which also allows some of the problems associated with same results to be avoided, as well as partially circumventing the latter objection to minimal achievement/minimum attainment is same progress. This position places more emphasis on individual differences and their impact on possible outcomes (results). The idea here is not to compare precise results but to compare rates of progress given different "starting points." One person's ability to conduct a computer search would not be compared with another's. Nor would the amount or type of information utilization unique to one user category be compared with that of another. It is the rate of progress that is important. Therefore the rate of progress one person made in learning to conduct a computer search would be compared with the rate of another. More realistically, the overall rate of progress one category of information users made in attaining some end would be compared to the rate of progress made by another category of information users. Rates of progress are to be the same if equity is to be achieved.

Comparing rates of progress on a one-to-one basis is not practical. Comparing rates of progress among categories of information users is more feasible but weakens the emphasis on individual differences, and can, of course, be misleading given the generality of the rates.

One objection to this position is that individuals (and even categories of information users) progress at different rates. If rates of progress are to be held constant, some individuals will probably have to be held back. If, to avoid this objection, same progress is interpreted to mean that differences in rates of progress are justifiable if they are a result of individual differences, the position becomes extremely weaker. As it is, even in its stronger interpretation, same progress can be criticized as doing nothing to close the gap between the information poor and rich. To guarantee that everyone makes the same progress ensures that the gap will be stabilized. Relatively, the information rich may not become richer, but neither do the poor.

Proportionate Results. This position focuses on proportionate representation and level of achievement, claiming that all levels of achievement should include proportionate representation of the significant groups within society. Within the context of information, these "significant groups" will (or should) correspond to the categories of information users discussed on page 39 i.e., intermediate and ultimate users; student/consumer, professional, and public roles; and focus groups/special needs: women, racial, ethnic, disabled/handicapped, immigrant/migrant, geographically remote, poor, elderly, non-English speakers, and institutionalized. Proportionate results would mean that each level of achievement should include a proportionate ratio of women and the poor, for example.

One immediate difficulty involves stipulating what is meant by "level of achievement." Obviously much hinges on this. Results (for information equity) have been interpreted to mean information applicability, intelligibility, and utilization. Determining levels within this would be arbitrary and could range widely.

Also central to this position is the basis on which proportionate representation is to be established. Will it be on the basis of census data, percentage of those expressing interest in particular types of information, percentage of people in the field of education, or some other arbitrarily picked focal point from which to determine proportions? And more pragmatically, how will it be determined that proportionate representation exists, regardless of how it is defined?

One type of objection to this position involves those commonly heard arguments against quota systems. In requiring proportionate representation at all levels of achievement, the emphasis is put on requiring a certain number of "kinds" of individuals at each level i.e., each category of information users must be represented at every level in proportion to its numbers. This is, in essence, a quota system, and thus subject to the charge made by some of reverse discrimination.

Another objection is that this position neglects the vast majority of people in need of assistance. The focus is on proportionate representation only. The fact that once proportionate results are achieved there will still be many other individuals remaining within the classification of the information poor is immaterial. The gap for them will only widen and they will continue to be neglected.

Equivalent Results. The intention of equivalent results is to maximize each individual's distinctive pattern of ability thus allowing maximum attention to individual differences. The focus is not on same results but equivalent results, meaning adequate achievement with respect to the individual's unique abilities. This position potentially allows more flexibility, allowing differences in progress and achievement while still attending to individual needs. In this sense it is somewhat similar to the intent of alternative actualism.

Such flexibility introduces problems, however. In addition to the pragmatic considerations involved in individualizing programs to such an extent, the question of "equivalence" presents grave potential problems.

1. How is "equivalence" to be defined?
2. What standard will be used to determine whether individuals are making equivalent progress and achieving equivalent results?
3. Whose values are reflected in this standard?
4. How are these comparisons to be made?
5. How is individual ability to be determined?

In reality, comparison of results will not be made on an individual basis but on a category basis i.e., this type of information user (special needs--women) has equivalent results to this other type (special needs--poor). The research of Stodolsky and Lesser (1967) cited on page 24 suggests this tendency and, in fact, provides substantiating data. They claim to have identified "patterns of intellective function distributed by ethnic group identification." While identifying "special abilities areas" unique to the individual can be a useful pedagogical device, the danger of emphasizing particular intellective functions as unique to specific groups, ethnic or otherwise, is that it can easily be used as an explanation of why certain categories of information users are predominant among the information poor, e.g., women do not possess the mathematical/logical ability to understand complex computer programs. Once this pattern or argument has been established, it is an easy step to claim that the gap between the information rich and poor reflects overall differences in intellective functions--or special abilities. Those who do not now have the ability to access, understand, and use available information probably do not possess that ability, or it certainly does not represent their distinctive pattern of ability. Therefore, if the intent is to maximize distinctive patterns of ability, it is not necessarily a sign of inequity within the context of information that a large percentage of blacks are found among the information poor. Given a careful examination, results may still be judged to be equivalent (if an equivalent results position is taken).

Conclusion

While there are similarities among information equity interpretations, access, treatment, and results represent a continuum of possible positions. Information equity as access focuses on the provision of routes of access or opportunities to obtain some benefit or treatment. Information equity as treatment focuses on treatments, reflecting the view that access alone will not guarantee equity. Information equity as results focuses on outcomes, maintaining that it is not sufficient to make access and treatment equitable since these can (and will) allow inequities with respect to information; the effectiveness of access and treatment must also be made equitable.

Each of the information equity interpretations discussed above involves its own set of problems, issues, consequences, and shortcomings. A realistic appraisal of the positive and negative aspects of each of these interpretations and how these relate to the particular context to which the interpretation will be applied can facilitate choosing among them. There is no one factually correct position, however. The interpretation selected ultimately reflects the values and priorities of those who have the power to influence equity policy decisions.

PART IV

RECOMMENDATIONS

A number of general recommendations can be made on the basis of the information contained in Parts I-III. These are, in a sense, idealized recommendations. They indicate the direction in which information equity policy statements and programs should proceed, suggesting the goals for which to aim. Obviously, adherence to these recommendations and attainment of the implied goals will be subject to a variety of political, economic, technical, and other constraints and limitations. Some of these recommendations may thus not be practically attainable. Certainly some are not completely attainable in the immediate future. But they can be worked toward and approximated. It is in this spirit that they are offered.

1. The use of equity rather than equality be retained and interpreted as meaning fairness. Fairness, in turn, should be interpreted to mean same (equal) treatment/access of equals but differential treatment/access for unequals, determined on the basis of need.

2. Needs should be interpreted to mean the gap between what is and what should be, focusing on the differences between the information poor and rich. Identification of needs should include consultation with professionals, experts, and the individual users and should ultimately include societal, community, personal, and group related needs in the form of long-range, short-range, potential, and actual needs.

3. Information should be given a broad interpretation. Within the context of educational information, what this will constitute should be determined on the basis of needs (as expressed by professionals, experts, and categories of users).

4. Identification of information needs of potential information users should focus on on the following categories:

   - Intermediary User/Ultimate User
   - Roles
     - Student/Consumer
     - Professional
     - Public

- Focus Group/Special Needs
    - women
    - racial
    - ethnic
    - disabled/handicapped
    - immigrants/migrants
    - geographically remote
    - poor
    - elderly
    - non-English speakers
    - institutionalized

While the acceptance of recommendations 1-3 may present no major difficulties, recommendation 4 is exceedingly complex. As has already been discussed, identification and classification of information users is, in itself, a difficult task. Each individual user is to be categorized as to function (intermediary/ultimate user), role, and group. Often the same individual will have multiple roles and will belong to more than one special needs group, thus complicating (and expanding) the identification and classification of users still further. To then identify the needs of users with respect to each of these categories seems an almost overwhelming task, not only in terms of time and cost but also the technical ability required to identify needs of such a vast array of information users.

The recommendation does, however, indicate the categories of information users whose needs should (if possible) be considered. When political, economic, technical, and other constraints make consideration of all these categories impossible, the recommendation can serve as a guideline and a goal to be approximated. A variety of "approximations" are possible. For example:

a. Information users can be considered only by function i.e., as intermediary and ultimate users. In this rather limited approach, identification of needs will focus only on whether an individual is an ultimate or intermediary user and the information needs which arise in conjunction with this classification.

b. The categories of ultimate/intermediary users and roles (student/consumer, professional, public) can provide the framework for classifying information users. While more extensive than option a, this approach is still manageable and feasible.

c. Only certain special needs groups may be emphasized. For example, a women's equity project may decide to focus only on the special needs group, women, or on the special needs of all women, but particularly racial, ethnic, and poor subgroups. Identification of information users as to function and role(s) may or may not provide an additional way of classifying users.

Central to any option (approximation) is the establishment of priorities within the context of the particular project or program, given the identifiable constraints. What categories of users are considered to be important with respect to identification of needs? How essential is knowledge of the role of the individual in identifying information needs? Which special needs groups are given priority? Who is to be included within each special needs group i.e., which ethnic groups or "how" geographically remote?

While this recommendation may seem too extensive and complicated, it reflects the reality with which information equity policies and programs must cope. There are, in fact, a variety of information users, each with their own category and individual information needs. While it may not be possible to identify and consider all these needs, this recommendation suggests the categories information equity policies and programs should examine in establishing priorities. It is better to recognize that these information user categories and needs exist and are temporarily being neglected because of priorities that have consciously been established than to ignore totally their existence.

5. Production of information should reflect consideration of the needs (and values) of all categories of information users.

To produce information that reflects the needs of all the designated categories of information users first requires identification and classification of users and determination of their needs. Thus, this recommendation involves the same problems as discussed above.

The gaps between existing information and what would be required to meet needs indicate what additional kinds of information should be produced. How and whether to produce information which reflects all these often conflicting needs involves problems in addition to those discussed in recommendation 4. Is it practical to produce this information, particularly in terms of costs? Is it even feasible i.e., do we have the capability and necessary prior knowledge? Should all information needs be met regardless of the intentions and values of the user(s) and the potential consequences? (This is one of the questions being raised in connection with recombinant DNA research.)

Again, this does not mean this recommendation should be disregarded. Obviously judgments, choices, and priorities will have to be made. This was one of the points implicit to Part III. However, the recommendation can serve as something to work toward and can be approximated in ways similar to those discussed in connection with recommendation 4.

6. In developing information equity oriented programs and policies, the focus should be on intelligibility, applicability, and utilization of information. Information should be intelligible to the user; it should be applicable i.e., it should have identifiable value for the user; and it should be put into use.

This recommendation raises obvious problems, many of which are similar to those raised in connection with recommendations 4 and 5. To ensure that information is intelligible and applicable for all information users is quite likely impossible. However, intelligibility, applicability, and utilization are primary concerns which should be reflected in policies and programs.

7. The interpretations given to information equity--access, treatment, results--should be considered generally representative of the various meanings associated with information equity and the terminology suggested here should be adopted and standardized.

8. Policies and programs should reflect a concern for access, treatment, and results. This involves providing routes of access to information, disseminating the information, and ensuring that the information is applicable, intelligible, and ultimately used. To neglect any one of these will lessen the possibility of decreasing the gap between the information rich and poor. When priorities are established, results interpretations are potentially the most extensive and can provide the best check on the actual effectiveness of program activities.

The problems involved with this recommendation are the topic of Part III and need not be reiterated here. Obviously it will not always be possible to design and implement programs focusing on access, treatment, and results. Various constraints and limitations may prohibit this. Particularly on a small scale, however, it is possible for a program to focus on all three. It is at the macro level, focusing on all categories of users, that the idea of access, treatment, and results seems overwhelming. In such cases, priorities are established, given the context, values, constraints, etc. as discussed in Part III. Perhaps in some cases it is only possible to provide access in the short term. This recommendation represents what can be aimed for in the long term. Numerous approximations of this goal have been illustrated throughout the paper (particularly in Part III) and the positive and negative aspects, consequences, etc. have been discussed.

9. Specific policy recommendations as to which categories of users should be given special attention, whose needs are to be given priority, what kinds of information should be made available, etc., should be developed, using the conceptual work completed here as a theoretical basis and the formulation-implementation questions (Part III) as guidelines. (Specific policy recommendations of this kind do not fall within the domain of this paper.)

These specific policy recommendations will involve both the collection of empirical data and the application of value judgments as to priorities, program orientation, and so forth. This requires a definite commitment to the funding of further equity research and a determination and examination of the directions this research will and should follow. In addition, it requires making explicit those values and priorities that have remained unstated in previous equity policy decisions.

In a time of limited resources, choices must be made among competing demands for goods and services. Information is not currently equally accessible, intelligible, and actionable to everyone. In formulating and implementing information equity policies, difficult choices must be made and priorities established. The conceptual work presented here provides the framework for establishing priorities and developing coherent, consistent policy recommendations.

NOTES

[1] The other concept of equity identified by the Rand researchers is "fiscal neutrality."

[2] An alternative position would be "same" simply means "fair" and "just" (in terms of distribution).

[3] In A Theory of Justice (1971), Rawls advances a new theory of justice--justice as fairness. It is difficult to categorize this position into the aforementioned equality (sameness)-equity (fairness) framework. The focus is on justice; the actual term, "equity," is not used. The emphasis on fairness suggests a direct connection, however. There are those, in fact, who subsume equality (or equity) under justice. Weale (1978) places the "rationale of the equality principle inside the theory of justice" (p. 31) and Burbules, Sherman, and Lord (1979) consider equal opportunity to be a "principle of justice" (p. 2). Justice as fairness, then, may provide a bridge between equity and equality. Certainly, it indicates the complexity of the relationships among equality, equity, and justice. However, a discussion/analysis of justice is beyond the scope of this paper.

[4] See also Blackstone, W. T. "The Principle of Equality and Educational Opportunity." Proceedings of the Twenty-first Annual Meeting of the Philosophy of Education Society, 1965, p. 70.

[5] See also Bedau, H. A. "Egalitarianism and the Idea of Equality." In Pennock, J. R. and Chapman, J. W. (eds.). Equality , Nomos IX, Yearbook of the American Society for Political and Legal Philosophy, New York, NY: Atherton, 1967, pp. 20-21 for a discussion of this principle.

[6] Blackstone discusses these in connection with equality only, not equity.

[7] This prescriptive component is not unique to judgments of relevance. Equality and equity have both a descriptive and a prescriptive function. Integral to the selection of characteristics or factors considered important in determination of equality or equity is the utilization of value judgments. Those characteristics/factors selected as appropriate prescribe upon what basis equality or equity is to be judged. Value judgments are not a matter of empirical determination; they are subject to debate and disagreement and lack any generally agreed upon means of verification or consensus. Thus the prescriptive function of equality provides a continual source of disagreement.

[8] See also Long, N. et al. Information and Referral Centers: A Functional Analysis. Minneapolis, MN: American Rehabilitation Center, 1971.

[9] See Weale, A. Equality and Social Policy. London, England: Routledge and Kegan Paul, 1978, p. 91.

[10] According to Henry Levin (1974), "equal educational opportunity was considered to be the antecedent for equal opportunity per se. That is, the goal of the common school was equal opportunity and equal educational opportunity represented the means of achieving the goal. Implicit in this policy was the view that, in a just society, the average child from any social origin would begin his adult life with equal chances of success relative to that of a child from another stratum" (p. 30).

[11] There is a sense in which actualism can be interpreted as representative of equality of treatment rather than equality of opportunity. That is, the concern in some actualist positions is not only with access but also with providing treatments that enable an individual to fully take advantage of this access. For the purposes of this paper, however, actualism will be interpreted only as an equality of opportunity position. In a later paper this new classification of actualism will be considered in more detail.

[12] This example indicates the overlap in positions. The notion of representative ratios can be interpreted as output--results, as is discussed on page 24 in connection with proportionate results. Preferential hiring can also be viewed as access--opportunity i.e., being provided the chance for success. The example is used here to illustrate equity as input and is a simplification of the complex issues involved in preferential hiring.

[13] See Coleman, J. et al. Equality of Educational Opportunity. Washington, DC: U.S. Government Printing Office, 1966.

[14] See Coleman, J. "The Concept of Equality of Educational Opportunity." In Levine D., and Bane, M. J. (eds.). The "Inequality" Controversy. New York, NY: Basic Books, 1975, pp. 207-208.

[15] See Burbules, N., Sherman, A., and Lord, B. Equity, Equal Opportunity, and Education. Stanford, CA: Stanford University, Center for Educational Research at Stanford, Institute for Research on Educational Finance and Governance, September 1979 for a discussion of the first four of these interpretations.

[16] See Wise, A. E. Rich Schools, Poor Schools. Chicago, IL: University of Chicago Press, 1967, p. 191 for a discussion of this view.

[17] See Deutsch, M. "Equity, Equality, and Need: What Determines Which Values Will Be Used as the Basis of Distributive Justice?" Journal of Social Issues, Volume 31, Number 3, 1975, p. 139.

[18] This is not to suggest, however, that epistemology does not raise issues important to information equity. For a discussion of some of the epistemological issues involved in information equity considerations, see the work of Brenda Dervin on the subjectivity of information and individual "sense-making." See, for example, Dervin, B. Sense-Making as a Prerequisite for Information Equality. A paper presented to the Seventh Annual Telecommunications Policy Research Conference. Skyton, PA: April, 1979.

[19] See Hood, P. D. Indicators of Knowledge Production, Dissemination and Utilization: A Conceptual Framework. San Francisco, CA: Far West Laboratory for Educational Research and Development, February 1979, p. 8.

[20] See the work of Brenda Dervin for an alternative conceptualization of information users and needs.

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